2015-1754

United States Court of Appeals
for the Federal Circuit

IPCOM GMBH & CO.,

Appellant,

V.

HTC CORPORATION,

Appellee.

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Appeal No. 2014-003314.

CORRECTED PRINCIPAL BRIEF OF APPELLANT IPCOM GMBH & CO.

Meredith Martin Addy
(*Principal Counsel*)
Matthew M. Holub
KATTEN MUCHIN ROSENMAN LLP
525 W. Monroe Street
Chicago, IL 60661
(312) 902-5200

Jeffrey A. Finn
KATTEN MUCHIN ROSENMAN LLP
2029 Century Park East
Suite 2600
Los Angeles, CA 90067
(310) 788-4494

CERTIFICATE OF INTEREST

Counsel for Appellant IPCom GmbH & Co. certifies the following:

1. The full name of every party or amicus represented by me is:

   IPCom GmbH & Co., KG.

2. The name of the real parties in interest (if the party named in the caption is not the real party in interest) represented by me are:

   Not applicable.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

   IPCom Holding GmbH; and Karols Development Co., LLC.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by this firm in the trial court or agency or are expected to appear in this court are:

   Meredith Martin Addy, Jeffrey A. Finn, and
   Matthew M. Holub of Katten Muchin Rosenman LLP;

   Mark H. Remus, formerly of Katten Muchin Rosenman LLP; and

   Michael S. Pavento and John S. Pratt of Kilpatrick Townsend & Stockton LLP.

Dated: September 16, 2015 By: /s/ Meredith Martin Addy

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GLOSSARY AND LIST OF ABBREVIATIONS

AAD:	access authorization data.
ACD:	access class data.
ACI:	access class information.
ATV:	access threshold value.
Channel:	a radio resource within a communications network. Examples of Channels include a "Random Access Channel" ("RACH") and a "Packet Random Access Channel" ("PRACH").
Channel Control Signal:	a signal broadcast by a base station to all subscriber stations in its cellular range used to control subscriber station network and channel utilization. A channel control signal may include both AAD and Persistence Control information.
Class Barred:	the state of a subscriber station being prevented from accessing the network based on the subscriber station's user class.
GSM Specifications:	the March Specification and December Specification, collectively.
March Specification:	GSM 04.60 V2.0.0 Specification, European Telecommunications Standards Institute ("ETSI") March 1998.
October Specification:	GSM 04.60 V6.2.0 Specification, ETSI, October 1998.
Overload Prevention:	techniques used by wireless networks seeking to *prevent* data overload on the RACH or PRACH before it happens by managing subscriber station access to the network.

Persistence Control:	overload relief techniques used by wireless networks, such as GSM, that control persistent efforts to transmit on a RACH or PRACH *after* a subscriber station is granted access to the channel and has failed to successfully transmit data.
The Claims:	Appealed Claims 6, 26, and 30.

STATEMENT OF RELATED CASES

No appeal in or from this proceeding was previously before this or any other appellate court.

The patent at issue in this appeal, U.S. Patent No. 7,043,751, was the subject of Appeal No. 12-1659. That appeal concerned litigation between IPCom and HTC Corp. and HTC America, Inc. in which IPCom accused HTC of infringing Claim 13 of the '751 Patent. In the underlying district court litigation, *HTC Corp. and HTC America, Inc. v. IPCom GMBH & Co., K.G.*, Civil Action No. 1:08-cv-01897 (D.D.C.), the district court granted HTC's Motion for Summary Judgment of Noninfringement. IPCom appealed to this Court, which affirmed the district court judgment. Copies of the district court's opinion and this Court's affirmance are provided in the Appendix.

STATEMENT OF JURISDICTION

The United States Patent & Trademark Office Patent Trial and Appeal Board (the "Board") had jurisdiction over this case pursuant to 35 U.S.C. § 134(b) (2011). The Board mailed its decision on June 27, 2014 and its Decision on Request for Rehearing on February 27, 2015. IPCom GmbH & Co. ("IPCom") filed a Notice of Appeal from the final decision of the Board on April 27, 2015 in accordance with 28 U.S.C. § 2107 and Fed. R. App. P. 4. The Notice of Appeal was docketed in this Court on June 17, 2015. The Notice of Appeal was timely filed pursuant to

35 U.S.C. § 142. This Court has jurisdiction over this appeal under 35 U.S.C. § 141.

STATEMENT OF THE ISSUES

1. Whether the Board legally erred by finding Claims 6, 26, and 30 anticipated and obvious despite failing to find that the GSM Specifications disclose the claim limitation requiring the evaluation unit be configured to determine a right of access to the network channel based on an ATV comparison test.

2. Whether the Board legally erred by finding Claim 26 anticipated and obvious by misconstruing "on the basis of access class data," to broadly mean "where access is initially determined on the basis of access class data, and thereafter based upon random number comparison."

STATEMENT OF THE CASE

This is an appeal from a decision by the Board in an *inter partes* reexamination of U.S. Patent No. 7,043,751 ("the '751 Patent").[1] The Examiner rejected all claims of the '751 Patent as anticipated and/or obvious in view of the GSM Specifications, and the Board affirmed those rejections. A3–A4; A9; A17. Relevant to this appeal, the Board found Claims 6, 26, and 30 ("the Claims") unpatentable as anticipated or obvious under 35 U.S.C. §§ 102(b) and/or 103(a).

[1] The cited portions of the '751 Patent shall be referred to herein by column and line numbers, i.e., col:line-line.

A6–A9; A17. Because the Board misconstrued limitations in the Claims and failed to find the prior art disclosed all of the limitations required in the Claims, IPCom GmbH & Co. ("IPCom") appeals to this Court.

I. BACKGROUND

A. Mobile Phone Communications Must Be Managed To Avoid Overloading The Network

A cellular network and, more specifically, one or more "channels" that are part of the network, is susceptible to overloading if too many mobile phones – "subscriber stations"[2] – attempt to send data over that same channel at once.[3] If a channel becomes overloaded, then calls cannot be made and data cannot be sent and received in a timely fashion. This may happen, for example, at large sporting events where thousands of people located in (i.e., serviced by) the same cell simultaneously try to use the same channel. Users who have experienced slow, or no, subscriber station communications in such an environment may have experienced the overloading problem firsthand.

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[2] As used in this brief, "mobile phone" is synonymous with "subscriber station," "mobile station," or "mobile handset."

[3] In the '751 Patent, the relevant channel on the network over which subscriber stations transmit data is called the "Random Access Channel" ("RACH"). *See* A1073, 3:33–39. Similarly, the same channel in the GSM Specifications is called the "Packet Random Access Channel" ("PRACH"). *See* A4340; A4954. For purposes of this appeal, we use the term "channel" to refer to both a RACH and a PRACH.

An even more consequential channel overloading situation can occur during emergencies and public crises such as what occurred on September 11, 2001. During these events, thousands of civilians may compete for access to the same channels to contact loved ones. This overload problem is compounded because policemen, firemen, and paramedics also need to access the same overloaded channels to coordinate rescue efforts.

The mobile network industry has addressed the channel overload problem in various ways. These include: (1) attempting to prevent overload conditions before they occur, i.e., "prevention" (*see, e.g.*, A4339–40); (2) remedying channel overload situations after they occur, i.e., "overload relief" (*see, e.g.*, A4340–3341); or (3) a combination of prevention and overload relief techniques (*see, e.g.*, A4339–41).

In general, prevention techniques attempt to proactively solve the channel overload problem by reducing message traffic on the commonly used channels by selectively limiting the rights of certain subscriber stations in a given cell to access the cellular network and its channels. *See, e.g.*, A1072, 1:45–64; A4339–40. This is achieved through the use of channel control signals that are broadcasted by the network base station to all subscriber stations in its cellular range containing – in the words of the '751 Patent – "access authorization data" ("AAD"). *See, e.g.*, A1072, 1:1–64; A4339–40. AAD includes information each subscriber station

uses to determine if it has right of access to the network and its channels. *See* A1072, 1:22–64; A1074, 5:36–43; A1075, 8:6–12. AAD can include myriad types of access information. The type of information and how it changes over time, as a function of expected channel utilization, determines how effectively a network is able to allocate its limited bandwidth of channels to subscriber stations and to prevent channel overload situations. *See* A1072, 1:22–64; A2634–35.

On the other hand, overload relief is achieved by putting in place one or more "persistence control" protocols for dealing with overloads such as data collisions on a channel ***after*** access to the channel already has been granted to the subscriber stations. *See, e.g.*, A4340–41. One known method of such relief is to provide a repetition counter to each subscriber station that allows messages to be resent from the subscriber station at staggered intervals in the event of a data collision with data sent from other phones. *See, e.g.*, A1076, 10:24–41 ("A relief of the r30 [RACH] can additionally be obtained by providing a repetition counter and/or a repeat interval."); A2630; A4341. Another known method is to randomly limit subscriber stations during a channel overload condition from transmitting based upon "persistence level," a piece of data sent in the control signal broadcast by the base stations. *See, e.g.*, A1076, 10:24–41; A2630; A4340.

Thus, importantly, in the mobile network industry, information sent to subscriber stations in broadcasted control signals for the purpose of achieving

overload relief is not and would never be considered or referred to as "Access Authorization Data," or AAD, because it is not used to control a subscriber station's right to access to the channel; rather, it is used to control post-access overload relief. *See* A2630–31; A4339–41.

B. Prior Art Protocols Attempted To Solve Network Overload Through A Combination Of Prevention And Relief Techniques

GSM (the Global System for Mobile Communications, originally *Groupe Spécial Mobile*), is a standard developed by the European Telecommunications Standards Institute ("ETSI") to describe protocols for cellular networks used by subscriber stations. *See* A4454. The GSM standard has evolved over the years, with periodic updates. *See* A4456. The March and October 1998 GSM 04.60 Specifications (collectively, the "GSM Specifications"), covering, *inter alia*, subscriber station access control, existed at the time of the invention of the '751 Patent.[4] A4316; A4931.

Pursuant to Section 7 of the GSM Specifications, and relevant to the appeal, once a subscriber station receives and determines the content of the channel control

[4] There are minimal differences between the March and October 1998 GSM Specifications. Because of their similarity, the GSM Specifications are treated collectively and interchangeably. Where there are differences between the two specifications as they relate to access and persistence control, those differences are identified.

signal broadcast by a base station,[5] two steps govern the subscriber station's ability to successfully send information over a channel. A2627–28; A2630–31; A4339–43; A4953–58.

- First, the subscriber station must gain access to the network. A2627–29; A2631; A4339–40; A4953–54.
- Second, it must be able to send packets of data over the channel. A2628–31; A4340–43; A4954–58.

These steps are described in sections 7.1.1 and 7.1.2 of the GSM Specifications, respectively. Section 7.1.1, titled "Permission to access the network," relates to the threshold right of a subscriber station to access the cellular network. A4339–40; A4953–54. Section 7.1.2, entitled "TBF establishment using one phase packet access,"[6] relates to protocols a subscriber station can use, once access to the network is permitted pursuant to Section 7.1.1., for transmitting data over the channel. A4340–43; A4954–58. Taken together, §§ 7.1.1 and 7.1.2 describe a two-tiered system employing known overload prevention and overload relief techniques. A4340–43; A4954–58.

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[5] This channel control signal takes the form of the "PRACH Control Parameters" in Section 12.14 of the GSM Specifications. A4430–32 (Tables 96 and 97 in the March Specifications); A5077–79 (Tables 85 and 86 in the October Specifications).

[6] In the October GSM Specification, section 7.1.2 is titled "Initiation of a TBF establishment." A4954. "TBF" stands for Temporary Block Flow and is defined as a temporary connection between a subscriber station and base station used to support a unidirectional transfer of data.

1. The GSM Specifications Use Access Class Information To Govern Rights Of Access To The Network[7]

In the GSM Specifications, the right to access a channel on the network is managed through "user classes." A2625–27; A2631; A4339–40, A4953–54.[8] Every subscriber station is assigned to one of 10 general user classes: Access Classes 0–9. A2625–26; A2631; A4432; A5079. Additionally, a subscriber station also may be assigned to one or more special user classes: Access Classes 11–15. A2625–26; A2631; A4432; A5079. These special user classes are reserved for groups of priority users, such as policemen, firemen, and paramedics. A2625–26. The user class for a subscriber station is stored on a phone's Subscriber Identification Module ("SIM") card. A2625–26.

The channel control signal broadcast by the base station and received by the subscriber station includes "Access Class Information" ("ACI")[9] that identifies the

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[7] While the GSM Specifications refer to the ACI test as a mechanism for "Permission to Access the *Network*" (A4339–40, subclause 7.1.1.), they also place the ACI data string ("ACC_CONTR_CLASS") as a component of the broadcasted channel control signal ("PRACH Control Parameters" (A4430–32, subclause 12.14)), implying it is a mechanism for *channel* access. The Board did not focus on a network/channel distinction and for the purposes of this appeal, Appellants do not either.

[8] In the March 1998 GSM Specification only, network access is also governed by "Priority Access Threshold" parameters, but this is not germane to the issues on appeal. A4339.

[9] In the GSM Specifications, this information is a 16-bit field called "ACC_CONTR_CLASS", and in the '751 Patent is called either ACI or "Access

user classes authorized to access channels on the network. A2625–27; A2631; A4339–40, A4953–54. A subscriber station determines if it has a right to access a channel on the GSM network by comparing the user class — or classes — stored on its SIM card to the ACI. A2625–27; A2631; A4339–40, A4953–54. If a subscriber station is a member of an authorized class, it is granted a right to access. A2625–27; A2631; A4339–40, A4953–54. In this manner, subscriber stations may be permitted or denied access to network channels in groups, for example, of one-tenth of the mobile population, assuming the subscriber stations are evenly divided across Access Classes 0-9.

Subscriber stations that are members of the special priority classes, such as firemen and policemen, may be given priority access to the network over the rights of other users. A2625–27; A2631. By way of example, assume a subscriber station is a member of an authorized class assigned to users who are first responders to emergencies. Those first responders belong to one of the special classes greater than 10. A2625–27; A2631. Should an emergency occur and the network operator needs to ensure that all first responders are given permission to get on the network but are not crowded out by the other subscriber station classes, the network is capable of broadcasting to all subscriber stations a control signal

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Class Data" ("ACD"). A1072, 1:45–64; A4432; A4900; A5079. In this brief, ACI is used synonymously with ACD.

that permits access to first responders only, barring all other mobile stations. *See* A2625–27; A2631; A4339–40, A4953–54. For example, the GSM Specifications disclose a 16-bit pattern, one bit for each class except Access Class 10, indicating whether each access class is barred or not. *See* A2625–27; A2631; A4339–40, A4432; A4953–54; A5079.

Under the GSM Specifications, if a subscriber station is barred from accessing the network because it is a member of a barred class and is not a member of a special class, the subscriber station has no way to access the network unless and until the mobile network operator broadcasts a subsequent control signal that contains a new ACI that grants right of access to network channels for at least one access class to which the subscriber station belongs. *See* A2625–31; A4339–40, A4953–54. Should that occur, all members of each of the authorized classes – both civilian and first responder – will compete for channel access. While this simple method of access control helps reduce the occurrence of collisions, it is not sufficient to effectively eliminate overload conditions. A2628–31; *see* A4339-41; A4953–55.

2. After A Right of Access Is Granted, And Overload Occurs, The GSM Specifications Use Persistence Control To Remediate Channel Overload

Just because a subscriber station has the ***right*** (i.e., permission*)* to access a channel does not mean that the subscriber station will be able to successfully

transmit data over the channel. *See* A2628–31; A4340–41; A4954–55. After access to a channel has been granted, overloading and transmission collisions still may occur that prevent an authorized subscriber station from successfully transmitting data across the channel. Therefore, the GSM Specifications disclose various overload remediation techniques for managing channel traffic after channel access rights have been granted. *See* A2628–31; A4340–41; A4954–55. These techniques – also known as "**persistence control**" – are termed and defined in the GSM Specifications as distinct and separate from the right of network access, described above. *See* A2628–31; A4340–41; A4954–55.

As the name suggests, persistence control governs how competing subscriber stations persistently attempt to transmit data packets across a channel *after* the subscriber stations are granted access. A2628–31; A4340–41; A4954–55. Persistence control is used to remedy data collisions on the limited bandwidth channel used by competing subscriber stations that already have been granted access to the it. A2628–31; A4340–41; A4954–55; *see* A14. Persistence control does not limit the class of subscriber stations that are allowed to access the channel. A2628–31; A4340–41; A4954–55. Instead, it dictates the timing of actual re-transmission attempts across the channel in an effort to alleviate data collisions and overload. A2628–31; A4340–41; A4954–55. It does so by delaying actual re-transmission attempts. A2628–31; A4340–41; A4954–55. Each

subscriber station in the permitted class or classes has access to the network and to the channel on which it wishes to transmit, but the persistence control parameters selected by the network operator command certain mobile stations to "back-off" from attempting to transmit on that channel at particular times. A2628–31; A4340–41; A4954–55.

As shown in Table 96 below and explained in the Petitioner-Appellee's Request for *Inter Partes* Reexamination (A25–26), in the March GSM Specification, a subscriber station determines which (if any) persistence control parameters to use by looking at information in the broadcasted channel control signal ("PRACH Control Parameters"), called a "flag bit," containing either an "L" or an "H". *See, e.g.*, A1025–26; A1031–32. The length (*i.e.*, number of data bits) of the control signal itself will vary depending on which flag bit is sent. *See* A4910; A4430–32; A5077–79. This flag bit is an integral part of the control signal because it alerts the subscriber station to expect a certain sized control signal, expect certain information, and therefore correctly process the channel control signal by knowing where the signal ends (A4430–32; A5077–79), and therefore as well as how to properly read the signals that come after the control signal. For example, if the value of the flag bit is an "H," the subscriber station understands that the information that follows comprises a "persistence level" type persistence control information string; if the value of the flag bit is an "L," the subscriber

station understands that the information that follows contains other – i.e., no "persistence level" – information comprising a bit string of a different length. *See* A4430–32; A5077–79. Table 96 from the March Specification shows the format and bit length of the channel control broadcast information:

Table 96: *PRACH Control Parameters* information elements

```
< PRACH Control Parameters IE > ::=
        < ACCESS_BURST_TYPE : bit (1) >
        < RANDOM_ACC_RETRY : bit (1) >
        < MAX_RETRANS : bit (2) >[4]
        < ACC_CONTR_CLASS : bit (16)
        { L { < TX_INT : bit (4) >
            < S : bit (4) >
            < PRIORITY_ACCESS_THR : bit (3) > }
        | H <PERSISTENCE_LEVEL : bit (4) >[4] } ;
```

A4430. The above routine provides specific bits for the timing and number of retries, including <MAX_RETRANS> and <PERSISTENCE_LEVEL>, among other things. *Id.*.; *see* A4339–41; A4953–55; A5077.

More particularly, the March GSM Specification discloses alternative persistence control methods for remediating failed transmission attempts: the "network-steered" method (A4340) and the "mobile-station steered" method. (A4341).

In the network-steered method, the network implements a "random selection" technique for backing off some subscriber stations but not others from retransmitting data, i.e., <PERSISTENCE_LEVEL: bit (4)>. *See* A2630; A4340. Here, the base station broadcasts "persistence level" values – P(i), where P(i) is

represented by {0, 1, 2, . . .14, 16}. The subscriber station then draws a random value (R) in the set {0, 1, … 15} to compare to the P(i) value. If P(i) ≤ R, the subscriber station is permitted to repeatedly attempt to transmit data on the channel, until it receives a confirmation of connection from the base station or an internal timer expires. A2630; A4340.

In the mobile-station steered method, the subscriber station will attempt to send data a predetermined number of times with randomized intervals between repeat attempts, i.e., <MAX_RETRANS: bit (2)>.[10] A2630; A4341. These persistence control algorithms therefore attempt to randomly spread transmission attempts on the channel from the subscriber stations that already have a right to access the network. A2630–31; A4340–41; A4954–55. Thus, persistence control under GSM does not define a new path for accessing a channel separate from the ACI test. If the right of access to the channel based on class information was never granted in the first place, a persistence control algorithm would never be triggered. A2628; A2630–31; A4340–41; A4954–55 (i.e., if the subscriber station is class barred because its user class stored on its SIM card does not match the ACI provided by the base station). Under the GSM Specifications, thus, a subscriber station has a *single linear pathway* for "getting on," or, attempting to transmit data

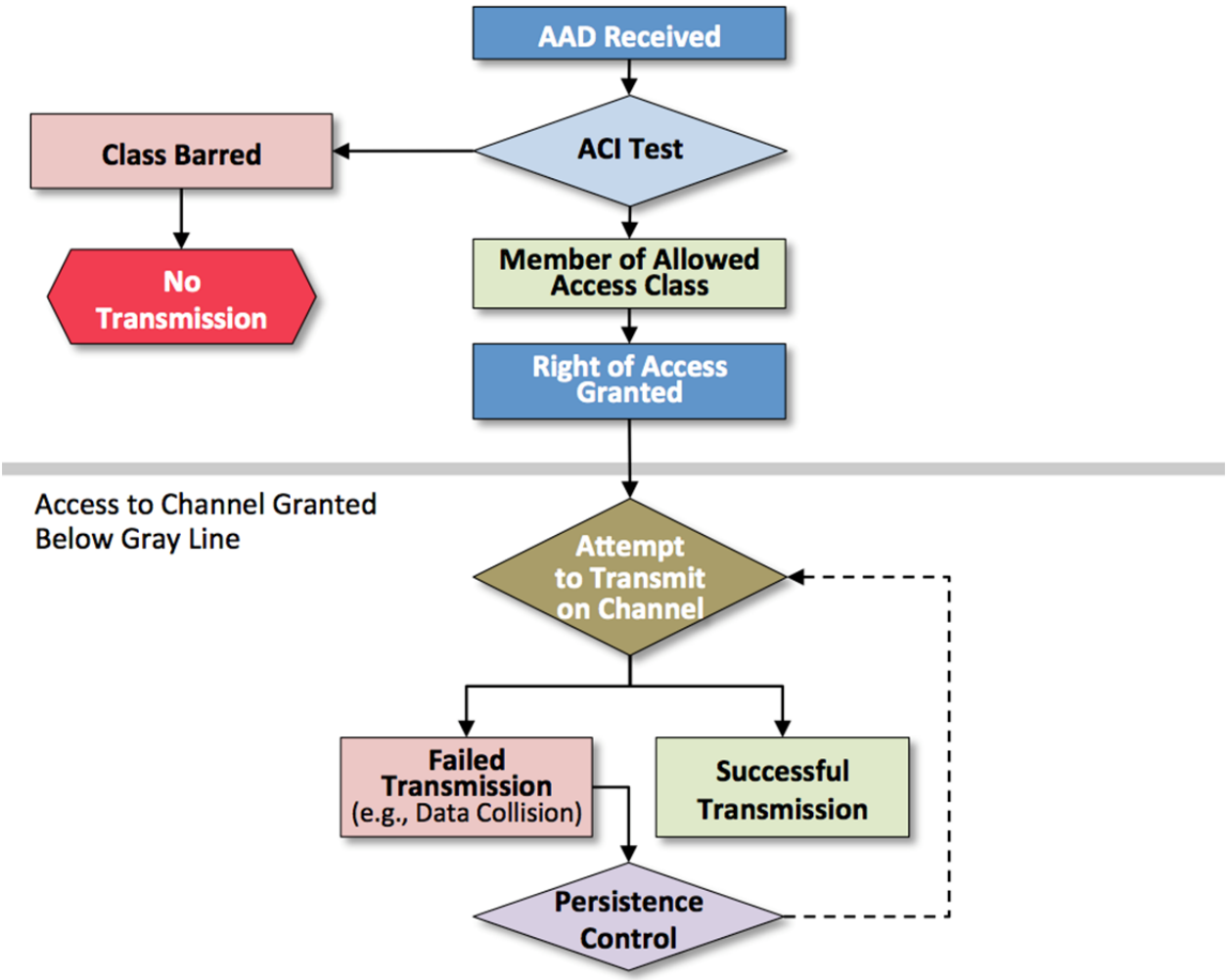
[10] The October GSM Specification essentially retains only the network-steered method in a section entitled "Access persistence control on the PRACH" (A4954–55), and includes a default value for the persistence level. A2631; A4954–55.

on, a channel: (1) user class and the ACI test, granting a right of access to the channel. Then, if necessary due to channel overload conditions, (2) persistence control is initiated to remediate the overload.

3. The GSM Specifications Provide A Single Pathway For Accessing The Network Channel

The following flow chart depicts (above the gray line) the single, linear, flow path for a subscriber station to determine a right of access to a channel according to the GSM Specification:

Chart 1: GSM Standard with Persistence Control (*Prior Art*)



See A2625–31; A4339–41; A4953–55; *see* A14. The subscriber station receives a channel control signal that includes ACI. A2625; A2627; A4339–40; A4953–54. The subscriber station performs an ACI test that compares the received ACI to the access class stored on its SIM card to determine if the subscriber station is in one of the authorized classes. A2625; A2627; A4339–40; A4953–54. If the subscriber station passes the ACI test, then it is granted a right to access the network. A2625; A2627; A2631; A4339–40; A4953–54. If the subscriber station fails the ACI test, then access is denied because the subscriber station is not a member of the access class and is therefore "class barred." *See* A2625; A2627; A2631; A4339–40; A4953–54. Even if a right of access is granted, however, the subscriber station is not necessarily able to successfully transmit data on the channel. *See* A14; A2628–31; A4340-41; A4954–55. Looking at the flow chart now below the gray line, when the subscriber station attempts to transmit on the channel, if a data overload or collision occurs and the transmission fails, persistence control is activated to govern the ability of the subscriber station to attempt again to transmit its data over the channel. *See* A14; A2628–31; A4340-41; A4954–55.

C. The GSM Protocol Has Several Shortcomings

Under the GSM protocol, the network operator can manage right of access to the channel based only on class barring. *See* A2625–27; A2631; A2633–34; A4339–40; A4953–54. This leads to two problems. First, if a subscriber station is

a member of a barred class, it does not receive right of access the network, hence it has no chance transmitting over a channel, even if there is sufficient bandwidth. *See* A2625–27; A2631; A2633–34; A4339–40; A4953–54. GSM provides no secondary pathway for a class barred subscriber station to access the network channel. *See* A2625–27; A2631; A2633–34; A4339–40; A4953–54.

Second, class barring is an on/off switch. All users in a particular class are either granted or denied right of access to use a channel. *See* A2625–27; A2631; A2633–34; A4339–40; A4953–54. In the case where all users in a particular class are granted access, data collisions and failed transmissions due to channel overload may occur as a result of many simultaneous transmissions on limited bandwidth. A2628–31; *see* A14; A4340-41; A4954–55. In such a situation, the base station will activate a persistence control routine. A2628–31; *see* A14; A4340–41; A4954–55. Therefore, GSM merely attempts to *remedy* an already burdened network by introducing commands to mobile stations that temporarily halt data transmission. In other words, persistence control dictates when transmission attempts are sent in order to alleviate channel overload. A2628–31; *see* A14; A2633–34; A4340–41; A4954–55.

II. U.S. PATENT 7,043,751

A. The '751 Patent Discloses Novel Channel Overload Prevention By Providing Two Different Paths To Access The Channel

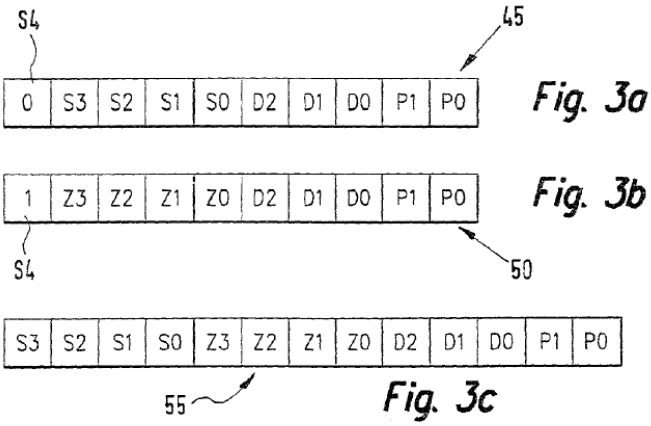
In contrast to the single access pathway of the GSM Specifications, the '751 Patent attempts to prevent channel overload by implementing a protocol that provides for two possible pathways for granting subscriber stations the right to use a channel. A1072, 1:22-64. One group of users may be permitted to use a channel based on permitted access class, while another group of users may be permitted channel access through a random number comparison test, *even if* they are not in a permitted access class. *Id.* The random number comparison test, used to allow access to a channel, is based on a comparison between a number broadcast in the AAD signal, called the **access threshold value ("ATV"),** and a random number generated by the subscriber station.[11] A1072, 1:22–41. If the ATV is less than the random number generated by the subscriber station, a right of access to the channel is granted. *Id.*

1. Embodiments Of The '751 Patent

The '751 Patent discloses two embodiments. The first embodiment discloses an AAD string for controlling channel access that includes *either* ACI *or*

[11] The '751 Patent refers to this number as "random or pseudo-random." There is no difference between these terms for purposes of this appeal. For sake of brevity, any mention of a random number in this brief is intended to also refer to a "pseudo-random" number.

ATV information. A1074, 5:36 – A75, 8:5. The second utilizes an AAD string that includes *both* ACI *and* ATV information. A1075, 8;6–62. In both embodiments, the subscriber station can be granted access to the channel using either ACI or ATV. The two embodiments are disclosed with reference to the bit patterns presented in '751 Figures 3a–3c, reproduced below.



See A1069, Figs. 3a, 3b, 3c; A1074, 5:36 – A1075, 8:–62.

The first embodiment (A1074, 5:36 – A1075, 8:5) uses a 10-bit AAD pattern, which is shown in Figures 3a and 3b (the "10-bit embodiment"). There, the first bit is an evaluation bit S4. The mobile station – through its "evaluation unit" – reviews S4 and determines whether the four bits that follow must be interpreted as ATV or ACI. A1074, 5:46–56; A1074, 6:65 – 1075, 7:15. In Figure 3a, S4 is 0, indicating the next four bits (S3, S2, S1, and S0) should be interpreted as an ATV for comparison with a random number generated by the subscriber

station. A1074, 5:46–56. In Figure 3b, S4 is 1, indicating the next four bits are ACI indicators for class-based permission. A1074, 6:65 – A1075, 7:15.

The second embodiment discloses a 13-bit AAD pattern, as shown in Figure 3c (the "13-bit embodiment"). A1075, 8:6–62. Here, the AAD signal always includes both ATV (S3, S2, S1, S0) and ACI (Z3, Z2, Z1, Z0) bits. It does not contain an evaluation bit (S4). When the subscriber station receives the AAD signal, it performs an ACI test by looking at the Z bits. If the phone is assigned to a permitted class as defined in the ACI, then right of access to the channel is granted. *Id.* If the subscriber station is not granted right to access based on the ACI test, it then asks if the AAD string contains an ATV for granting access based on an ATV comparison. *Id.* Importantly, the subscriber station always looks to the ACI – i.e., the Z bits – for the ACI test ***and only if necessary*** for asking if an ATV is present. A4900 (Claim 26); A1075, 8:63 – A1076, 9:67.

In the first embodiment, the mobile unit examines the evaluation S4 bit, and in the second, it first examines the ACI Z bits. Claim 26 illustrates and claims the ACI Z bit procedure of the second embodiment:

> [T]he evaluation unit for asking . . . ***on the basis of the access class data*** **[ACI]**, whether the access authorization data [AAD] include an access threshold value [ATV] for comparison of the access threshold value with a random number or a pseudo-random number . . . .

A4900 (Claim 26) (emphasis added). In this claim, the ACI received as part of the AAD signal allows the station to determine whether it has been granted right of access to the network dependent on or independent of an ATV. *Id.*; *see also* A1072 1:22–64. Different classes can be required to request right of access to the channel through different paths: a first class uses the ATV path in a random number comparison while a second class may gain access by passing the ACI test. A1072 1:22–64; A1074, 5:36 – A1076, 9:67.

2. Access Threshold Value Functions To Enable Access To A Network Channel

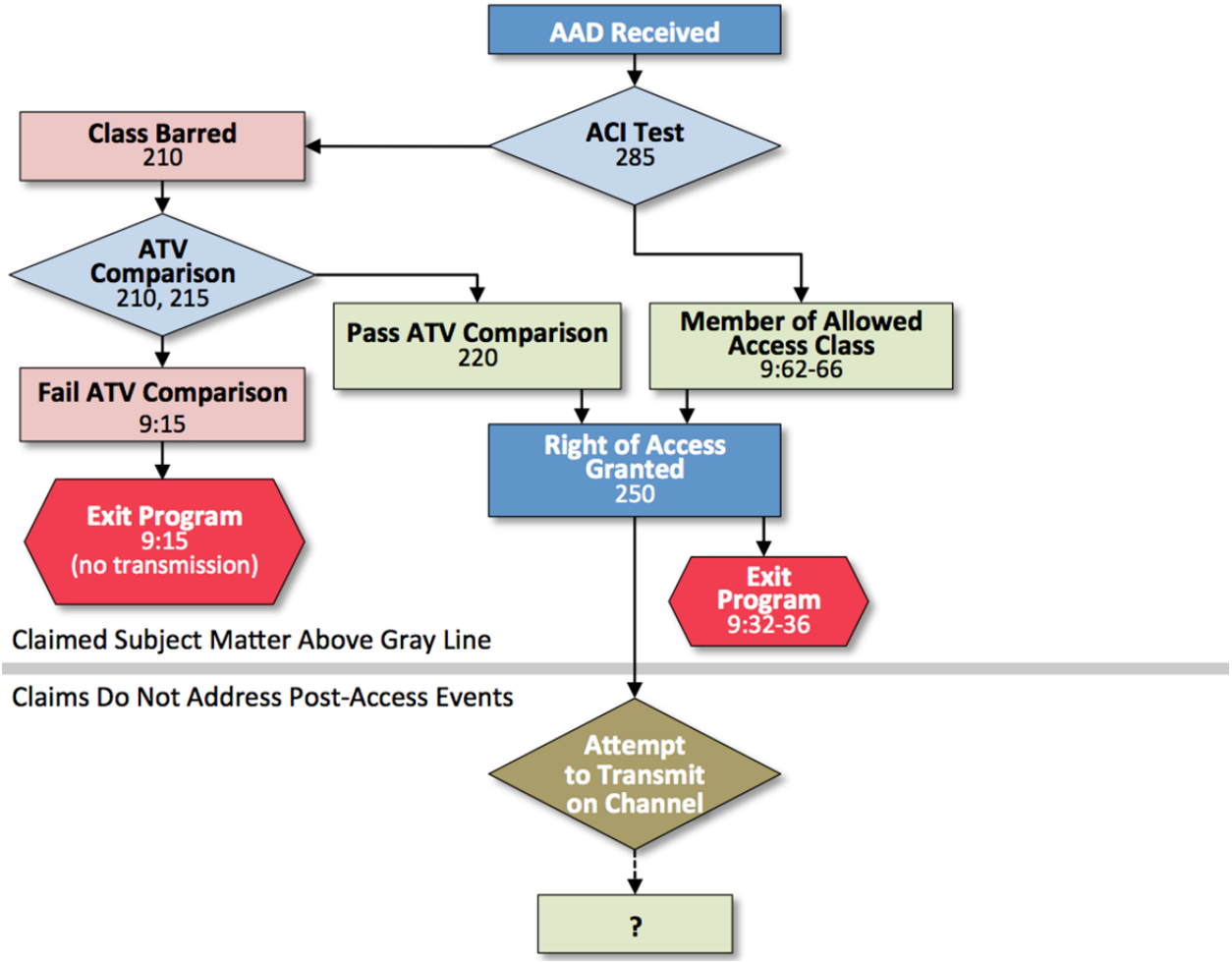
The '751 specification illustrates that, as its name implies, the function of the ATV (**Access** Threshold Value) comparison is to grant a right of access to the channel. As described, it is ***not*** used as a persistence control, overload relief technique, after access has been granted but transmission failed. *See, e.g.*, A1067, Abstract; A72, 1:22–41. In fact, persistence control, as understood in GSM, is briefly described in the '751 Patent as an additional tool to be optionally employed in conjunction with the claimed channel access control invention:

> [R]elief of the r30 [sic, RACH] can ***additionally*** be attained by providing a repetition counter and/ or a repeat interval. The repetition attempts allowed for re-sending a message from the corresponding mobile station to the base station 100 over the r30 [sic, RACH], in the event of collision with a message from another mobile station.

A1076, 10:24–29. Because persistence control minimizes a subscriber station's repeated channel transmission attempts *after* it has been granted a right of access, it is a protocol that can be used with the '751 invention as an optional, additional, post-access layer of overload relief in conjunction with the invention of the '751 Patent. *See id.* But, clearly, persistence control is ***not part*** of the ***claimed*** invention.

The flowchart below steps through the process disclosed in the '751 Patent highlighting key differences between the disclosed invention and the prior art GSM Specifications. Specifically, the '751 Patent provides for separate network access pathways, ACI Test at 285 and ATV Comparison at 210, 215. By contrast, the GSM Specifications only allow for one linear network access pathway. In addition, the '751 Patent shows that "persistence control" as described in the GSM Specification, *see Supra* Chart 1 at 15, is used to alleviate overloading ***after*** it occurs, whereas, as depicted in Chart 2 below, the separate pathways set forth in the '751 Patent work to prevent overloading ***before*** it occurs (above the gray line).

Chart 2: Embodiment 2, '751 Patent, Claimed Invention



See A1069, Fig. 3c; A1070–71 Figs. 4a–4c; A1075, 8:63 – A1076, 10:41.

The inventors of the '751 Patent recognized that using a random number comparison protocol as a channel *access* control mechanism ("ATV comparison"), in a unique combination with a known ACI protocol would provide a mobile network with far greater pre-access overload prevention flexibility and control than previously possible. *See* A1072, 1:22–64; A2630; A2634–35. Thus, contrary to the GSM prior art, the '751 Patent addresses the overload problem by providing a different and more robust preemptive overload control mechanism over

transmissions through two separate pathways, each capable of granting a right of access to the channel. *See supra* Chart 2 at 23, Blocks "Pass ATV Comparison" and "Member of Access Class." A right of access to transmit on the channel is then directly granted, giving the network operator more flexibility and control over permitted users to prevent overload. *See* A1072, 1:22–64; A2630; A2634–35. GSM, on the other hand, merely offers rudimentary overload prevention in the form of class barring on the network in conjunction with overload relief techniques focused on curing overload after it has already occurred. A14; A2625; A2627–31; A2633–34; A4340–41; A4954–55.

B. Prosecution History Of The '751 Patent

Robert Bosch GmbH ("Bosch") filed the German application for the invention claimed in the '751 Patent on March 8, 1999. A1067. The application nationalized into the U.S. in 2000. During U.S. examination, the claims were rejected in view of a prior art patent to Glenn et al. (U.S. Pat. No. 4,707,832). A1186. After a response and amendment, a Notice of Allowance issued, noting that:

> Applicant's representative gave an overview of a novel feature emphasizing . . . that the Glenn reference does not teach or render obvious the claimed features of a subscriber station having an evaluation unit, and determining means for comprising and ***granting access to a channel based upon a threshold and authorization data***.

Id. (emphasis added). The Patent Office issued the '751 Patent on May 9, 2006. A1067. On November 26, 2007, Bosch assigned the '751 Patent to IPCom. A1151.

C. IPCom Asserts The '751 Patent Against HTC

In response to a declaratory judgment lawsuit filed by HTC Corporation ("HTC") against IPCom in November 2008, IPCom asserted a counterclaim for infringement of the '751 Patent against HTC. A5423, A5433–34. IPCom asserted, *inter alia*, that HTC infringed Claim 13 of the '751 Patent. A5433–34. In 2012, the district court ruled on HTC's motion for partial summary judgment of noninfringement and invalidity of Claim 13 in the '751 Patent. A4841. In its opinion, the court relied on its construction of Claim 13 requiring a "direct" comparison between the ATV sent from the network base station and the random number generated at the mobile station. A4846–48 (the court "construed the 'ascertaining' clause as 'comparing an access threshold value to a random or pseudo random number . . .,' thereby interpreting Claim Thirteen as requiring a direct comparison.").

Under this construction, the court found no literal infringement because the accused devices modified the value sent from the base station, and thus a "direct" comparison between the base station value and the random number generated at the mobile station never occurred. A4850–51. The court similarly found no

infringement under the doctrine of equivalents because the "way" the comparison worked in Claim 13 could only be satisfied by a "direct" comparison. A4852–54. IPCom timely appealed the district court's ruling, arguing the court improperly construed Claim 13 and conflated literal infringement with infringement under the doctrine of equivalents. After briefing in this Court, the judgment of the district court was affirmed. A5477–78.

D. HTC Request *Inter Partes* Reexamination Of The '751 Patent

On May 28, 2009, HTC filed a request for *inter partes* reexamination of all claims of the '751 Patent based on anticipation and obviousness in view of the March and October GSM Specifications, either alone or in combination with secondary prior art references. A1001–01; A1004. On August 25, 2009, the PTO granted the request for *inter partes* reexamination and rejected all claims in the '751 Patent. A1181–82. In response, on November 25, 2009, IPCom filed an Amendment and Response to Office Action in *Inter Partes* Reexamination (the "Amendment") along with several supporting documents arguing against obviousness and anticipation. A2582. The Amendment included new claims 14–31, and IPCom argued that each of the claims in the '751 Patent (old and new) were patentable over the references cited by HTC and relied upon by the PTO. A2583–89; *see generally* A2591–618.

1. PTO Rejects All Pending Claims

The PTO issued an Action Closing Prosecution of the '751 Patent and rejecting claims 1–31 on October 3, 2011. A3021–22. On May 31, 2012, IPCom submitted a response that included a proposal to amend claims 14–31 to which HTC responded on June 25, 2012. A3683–89. The PTO issued a Right of Appeal Notice ("RAN") on August 7, 2012 maintaining the rejections it set forth in its October 2011 Action Closing Prosecution. A4101–73. IPCom timely filed a Notice of Appeal to the Patent Trial and Appeal Board on September 6, 2012. A4190. However, on October 8, 2012, IPCom filed a request for continued examination to seek entry of an amendment that overcame the rejections set forth in the RAN. A4209–11. It also sought to cancel claims 27-29 and 31. A4218–21. The request was granted on December 10, 2012. A4242–46. Subsequently, the PTO rejected claims 1-26 and 30 on April 10, 2013. A3247–49.

2. IPCom Appeals To The Patent Trial And Appeal Board

On July 10, 2013, IPCom filed its Appeal Brief to the Board, raising the following three issues relevant to this appeal:

> (1) Claim 26 was erroneously rejected under 35 U.S.C § 103 based on findings that the March and October 1998 GSM Specification each suggest asking on the basis on basis of the access class data, whether the access authorization data (AAD) include an access threshold value (ATV) for random number comparison;

> (2) Claim 30 was erroneously rejected under 35 U.S.C. § 103 based on findings that the March and October 1998 GSM Specifications each suggest evaluation units for alternatively granting access both dependent on and independent of and ATV;
>
> (3) Claim 6 was erroneously rejected under 35 U.S.C. § 103 based on findings that the March 1998 GSM Specification and October 1998 GSM Specification each suggest evaluation units for alternatively granting access both dependent on and independent of and ATV; and
>
> (4) All claims were erroneously rejected under 35 U.S.C. § 102 or 35 U.S.C. § 103 based on an interpretation of the "asking whether the access authorization data include an access threshold value" claim terms, as well as erroneous application of the GSM references
>
> (5) All claims were erroneously rejected under 35 U.S.C. § 102 or 35 U.S.C. § 103 based on an interpretation of the "right of access" and "access . . . is enabled" terms as well as erroneous application of the GSM references.

See A4870.

During the Appeal, IPCom stressed that the GSM references teach that access to the network is granted solely through the class barring action of the right-of-access step, and, importantly, that GSM's persistence control comparisons only control when and how mobile stations use the channel *after* access had been granted. A4875. By contrast, IPCom argued that in the '751 Patent, "right of access" necessarily implies the grant of permission to access the channel through either ACI ***or*** ATV. A4870–71. Despite IPCom's arguments, the Board found that the Claims were properly rejected for obviousness under § 103 because it

found "no evidence within the '751 Patent that [IPCom] intended to limit the definition of 'access' to 'initial access' [to the channel]." A6.

The Board affirmed the Examiner's determination that the claim terms "granting a right of access" and "access . . . is enabled" were not intended to be limited to an initial attempt for permissive access. A8. The Board reasoned that because IPCom failed to point to where in the specification "access" was limited to an "initial access," all '751 claims were either anticipated or obvious in view of the GSM references. A8–09.

On July 28, 2014, IPCom filed a Request for Rehearing pursuant to 37 C.F.R. § 41.79(a)(1), alleging, *inter alia*, that the Board committed error by: (1) misapprehending the meaning of "on the basis of access class data" in Claim 26; and (2) using an improper interpretation of the phrases "right of access" and "access . . . is enabled" in all claims. A5346. On February 27, 2015, the Board issued a seven-page decision denying the Request for Rehearing and declining to modify its initial decision. A11–18. In that decision, the Board further explained that "on the basis of class data" means "where access is initially determined on the basis of access class data, and thereafter based upon random number comparison." A15. Using this reasoning, it held that the GSM references describe "almost exactly" the ATV comparison as claimed in Claim 26. A15. Based on this

interpretation, the Board held that "on the basis of access class data" in Claim 26 was found in the GSM references. *Id.*

SUMMARY OF ARGUMENT

The '751 patent provides a unique and elegant solution to the problem of channel overloading in subscriber station communications. Unlike the prior art GSM Standards, the second embodiment and appealed claims (which are directed to this embodiment) of the '751 Patent (hereinafter collectively, "the '751 Solution") are directed solely to the category of channel overload *prevention*, not to overload *relief*. The '751 Solution provides a new and better system of preventing overloads than the prior art by providing two separate channel access paths: one path based on access class information ("ACI"), and, if that fails, a second path based on random number comparison using the ATV found in the ACI. This dual-path solution is not disclosed in the prior art. By contrast, the prior art GSM Specifications provide only a single path to access a channel, ACI, which, if unsuccessful, leads to class barring with no second chance.

The Board's finding that the GSM Specifications both anticipate and render obvious the '751 Solution is wrong as a matter of law and fact. Legally, (1) the Board erred by construing "right of access" to the channel to include post-access activities, such as re-transmission attempts and persistence control, when the claims specifically are limited to pre-access steps and structures for determining

access; and (2) the Board erred in construing "asking" "on the basis of access class data, whether the [AAD] include an ATV for comparison" to be so broad as to encompass any post-access activity, even though the claimed ATV comparison is limited to enabling access activity prior to transmission on the channel.

By misconstruing the claims, the Board failed to find all of the '751 claim limitations present in the prior art GSM references. Specifically, the Board failed to find the claimed separate paths of potential access to the channel, through an ACI test and through an ATV comparison. The GSM Standards only provide one network access path via the ACI test. Based on that error, the Board failed to find that the prior art disclosed an AAD signal that contains ACI information, and an ATV, both used for channel access. Instead, the Board held that prior art post-transmission, persistence control, used to alleviate channel overloading satisfied the claims specific requirements for achieving a "right of access" to the channel.

Second, the Board legally erred by interpreting Claim 26's "asking" "**on the basis of** access class data [i.e., ACD or ACI]" over broadly "to be almost exactly what is described in the cited GSM [Specifications], where access is initially determined on the basis of access class data, and thereafter based upon random number comparison." A15. Under this improperly broad definition, the Board ignored the claim requirement that the "asking [an ATV question] on the basis of ACI" be used for determining whether gaining a "right of access" to the channel

may be determined by an ATV comparison. A4900 (Claim 26). Instead the Board equated the claimed ATV comparison with GSM's persistence control. However, GSM's persistence control, which only occurs *after* access to the channel has been granted and an attempted transmission has failed, does not ask anything "on the basis of access class data." First, the plain meaning of "on the basis of ACI" does not mean that everything afterwards is, by its later occurrence, "on the basis of ACI." Second, the presence of GSM's persistence control, persistence level number is determined by a "flag" bit in the AAD, not an ACI bit in the AAD string, as required by Claim 26 (even if persistence control were equated with the patent's ATV). Finally, the specification of the '751 Patent distinguishes between its claimed right of access to a channel based on ACI and ATV, and the separate post-access persistence control used to remediate overloaded channels after an attempt to transmit on the channel has occurred.

The Board's legal error in interpreting the claims caused the Board to erroneously hold that Claims 6, 26, and 30 are invalid for anticipation and obviousness. This case should be reversed.

ARGUMENT

I. LEGAL STANDARDS

The Board's legal conclusions are reviewed *de novo*, and its factual findings are reviewed for substantial evidence. *Microsoft Corp. v. Proxyconn, Inc.*,

789 F.3d 1292, 1297 (Fed. Cir. 2015) (internal citations omitted). "Substantial evidence" is "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *Consolidated Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938) (internal citations omitted); *In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000) ("Substantial evidence is something less than the weight of the evidence but more than a mere scintilla of evidence.") (internal citations omitted).

The Board's decision on ultimate claim construction is reviewed *de novo*. *Microsoft*, 789 F.3d at 1297 (citing *Teva Pharms. U.S.A., Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841–42 (2015). Underlying factual determinations involving extrinsic evidence are reviewed for substantial evidence. *Id.*

A claimed invention is anticipated if "all of the claim elements and their limitations are shown in a single prior art reference." *In re Skvorecz*, 580 F.3d 1262, 1266 (Fed. Cir. 2009) (internal citations omitted). An anticipation determination under 35 U.S.C. § 102 is a question of fact, and the Board's decision is reviewed for substantial evidence. *See In re Skvorecz*, 580 F.3d at 1266. However, "[a]nticipation cannot be found, as a matter of law, if any claimed element or limitation is not present in the reference." *Id.* at 1268.

An obviousness determination under 35 U.S.C. § 103(a) is a legal conclusion based on underlying factual findings. *In re Kotzab*, 217 F.3d at 1369.

The Board's ultimate determination of obviousness is reviewed *de novo*. *Id.* Underlying factual findings are reviewed for substantial evidence. *Id.*

II. THE BOARD LEGALLY ERRED BY OVERBROADLY CONSTRUING "RIGHT OF ACCESS" THUS CAUSING ITS ERRONEOUS HOLDING OF ANTICIPATION AND OBVIOUSNESS

The Claims of the '751 Solution fundamentally differ from the GSM Specifications by disclosing a new and additional pathway to access the channel, which helps a mobile network ***avoid*** channel overload ***before*** it happens. *See* A1069, Fig. 3c; A1070–71 Figs. 4a–4c; A1075, 8:63 – A1076, 10:41; *see also* A1077, 11:25–54; A4900–01. The '751 Solution achieves this by cleverly managing the "***rights of access***" of a subscriber station to the channel. Specifically, the '751 Solution provides two paths to obtain the right to access the channel: one through an ACI test and one through an ATV comparison. *See supra* Chart 2 at 23 ("Member of Allowed Access Class" and "Pass ATV Comparison); A1069, Fig. 3c; A1070–71 Figs. 4a–4c; A1075, 8:63 – A1076, 10:41.

> In this way, subscriber stations of a predetermined user class [based on ACI] are allowed to use the telecommunications channel even whenever, on the basis of random distribution by means of the access threshold value [ATV] are not authorized access to this telecommunications channel.

A1072, 1:54-59.

The GSM Specification, by contrast, must rely entirely on the limited class barring ACI technique to achieve the right to access the channel. *See supra* Chart

1 at 15; A2625–31; A4339–41; A4953–55. If access is class barred, there is no alternative to seek right of access to the channel. Additionally, after a right to access to a channel is granted and the subscriber station attempts a transmission, the GSM Specification discloses methods to manage channel overloading, such as persistence control, based on random number comparison. A4340–41; A4954–55. However, the GSM Specifications do not disclose or suggest implementing any type of random number comparison during the process for gaining the right of access to the channel. *See* A2627; A3439–40; A4953–54.

A. Properly Construed, "Right of Access" To The Channel Does Not Include Activity Occurring Post-Transmission on the Channel

The Board legally erred in too broadly construing the claim term "right of access" (and other uses of "access" in the appealed claims)[12] to include not only subscriber station activity implemented to grant a right of access to the channel, but also activity that occurs *after* access has been granted for the purpose of relieving channel overloading issues. Specifically, the Board erroneously held:

---

[12] The appealed claims all require the "right of access" limitation. *See, e.g.*, A1077, 11:25–54 (Claim 6) ("A method for allocating ***rights of access to*** at least one telecommunications ***channel*** . . . and ***granting a right of access*** . . . as a function of" ATV comparison) (emphasis added); and A4900, (Claim 26) ("A subscriber station to which ***an access*** to at least one telecommunications . . . ***can be granted*** . . . and for ***ascertaining*** . . . ***whether an access*** of the at least one . . . channel ***has been enabled***") (emphasis added); A4901 (Claim 30) ("A subscriber station to which ***an access to*** at least one telecommunications ***channel*** . . . ***can be granted***"); *but see* A8.

> [W]e find no evidence within the '751 Patent that Patent Owner intended to limit the definition of "access" to "initial access." . . . Consequently, under a broad but reasonable interpretation, we find that both "access" and "subsequent access" meet the argument claim limitation.

A6. By including the term "subsequent access" into its definition of "access," the Board expanded the claim term "right of access" to include what occurs *after* grant of a right of access to the channel and a subsequent failed transmission:

> We find that Patent Owner's attempted distinction between "access" and "second and subsequent attempts to access" not to be persuasive that the Examiner erred by finding that both the March 1998 GSM Specification and the October 1998 GSM Specification teach or suggest the use of both AAD (class) and ***ATV (random number comparison persistence control)***.

A6 (emphasis added). The Board's statement here eviscerates the meaning of the claim term "right of access" or "access," by expanding it to cover activity that has nothing to do with a right of access to the channel. Yet, the '751 patent clearly and consistently uses and limits the term to refer specifically and only to "access to the channel" that occurs prior to an attempted transmission. A1076, 10:1-3. Either the subscriber station has access to the channel or it does not. *Id.* If it does, it gets to attempt to transmit data on the channel. ("At program point 250, the evaluation unit 60 enables access to the r30 [sic, RACH] by the associated mobile station *for using the usable telecommunications service*." A1076, 9:33-35.) If it does not have access, it may not attempt to transmit. The Claims go no further than this "right of access." Subsequent and repeated attempts to transmit data on the

channel, are not referred to in the '751 Patent as "access" routines because access has already been granted. Rather they are briefly referred to as "relief of the channel". A1076, 10:11-38. The Board's failure to appreciate this critical distinction claimed by this limitation of the '751 Solution led to reversible error.

1. The Plain Meaning Of Right Of Access To The Channel Does Not Include Post-Access Transmission Activities

First, the plain meaning of "right of access" as claimed is exactly what it says: a right to access the channel. Nothing in the claims covers activity on the channel *after* transmission has been attempted. *See* A1077, 11:25–54 (Claim 6); A4900 (Claim 26); A4901 (Claim 30). *See In re Zletz*, 893 F.2d 319, 322 (Fed. Cir. 1989) (holding the Board erred when importing limitations contrary to plain words of claim); *cf. Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) ("[T]he words of a claim are generally given their ordinary and customary meaning.") (internal quotations and citations omitted). The claims specify:

> Claim 6: A method for allocating ***rights of access*** to at least one telecomuncations channel . . . A1077, 11: 25-26 (emphasis added).
>
> [C]omparing the access threshold value (S) with a random number . . . (R); and ***granting a right of access*** to a telecommunications channel . . . A1077, 11:37-40 (emphasis added).
>
> ***[A]ccess*** to at least on telecommunications channel of the at least one subscriber station (5, 10, 15, 20) ***is granted*** as a function of the access class information (Z0, Z1, Z2, Z3) for this user class. A1077, 11:50-54 (emphasis added).

> Claim 26: A subscriber station to which an ***access*** to at least one telecommunications channel . . . ***can be granted***, comprising: . . . and for ascertaining, as a function of an outcome of a comparison ***whether access of the*** at least one subscriber station to the at least one telecommunications ***channel is enabled***. A4900, (emphasis added).
>
> Claim 30: A subscriber station to which an ***access*** to at least one telecommunications channel . . . ***can be granted*** . . . to compare the access threshold value [ATV] with a random . . . number, and to ***grant*** . . . ***a right of access*** to the telecommunications channel . . . that the subscriber station is assigned to an at least one predetermined user class to which ***access to*** at least one telecommunication ***channel . . . is granted*** . . . . A4901, (emphasis added).

Each of the claims is limited to activities that occur in an effort to gain a right of access or in granting a right of access to the channel. The claims do not purport to deal with activities that happen post-access to the channel, such as attempted transmission.

2. The Intrinsic Record Refers To Right Of Access Solely To The Granting Of Subscriber Station Access The Channel

The specification and other claims concur, referring to "right of access" every time to mean "right of access to a telecommunications channel." *See, e.g.*, A1067, Abstract; A1072, 1:31; A1077, 11:4-5, 11:9, 11:39, 12:2-3, 12:35-36, 12:60-61; A1078, 13:19-20, 14:12-13; *supra* at Statement of the Case, II.A. *See also In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260–61 (Fed. Cir. 2010) ("[C]laims should always be read in light of the specification and teaching in the underlying patent.").

First, while the '751 Patent specification briefly addresses activity that occurs after the subscriber station attempts, but fails, to transmit on the channel (A1076, 10:24-38), the '751 Solution does not address activity that occurs after the subscriber station attempts to transmit on the channel. *See* Chart 2 ("Attempt to Transmit on Channel") (citing A1069, Fig. 3c; A1070–71 Figs. 4a–4c; A1075, 8:63 – A1076, 10:41); *see also* A1076, 9:32–36. The specification makes clear that a "right of access" to the channel is the threshold determination of whether a subscriber station has permission to access the channel and attempt to transmit, and that the "right of access" does not cover actual "transmission" on the channel or any other activity that may occur post-access to the channel. *See* A1070–71, Figs. 4a–4c; A1072, 1:22–64; A1075, 8:63 – A1076, 10:41. For example, the specification discloses that once access to the channel is granted, the disclosed routine is exited:

> At program point 250, the evaluation unit 60 enables access to the r30 [RACH or channel] by the associated mobile station for using the usable telecommunications service. Next, the program is exited.

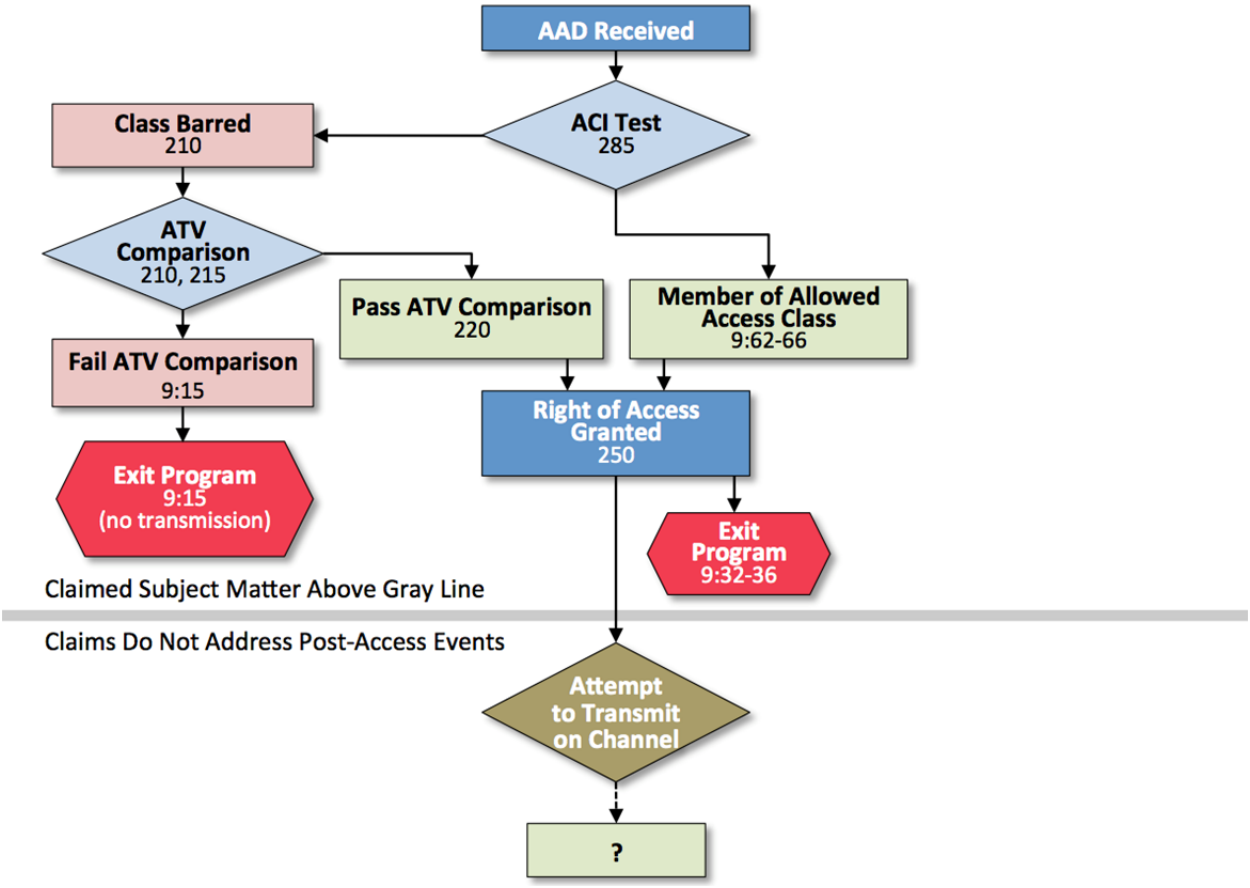
A1076, 9:32-36; *see also supra* Chart 2 at 23 ("Right of Access Granted 250" and "Exit Program"). The specification does not disclose or suggest using any of the claimed ATV comparison or ACI test at any time *after* the right of access to the channel has been granted. *See* A1070–71, Figs. 4a–4c; A1072, 1:22–64; A1075, 8:63 – A1076, 10:41.

> In all cases where the program is not exited from program point 250 [i.e., before analyzing the attempt to transmit on the channel], the evaluation unit [60] will have found no allowed access to the r30 [RACH or channel] for the associated mobile station 5.

A1076, 10:1-3.

Second, in explaining the ’751 Solution, the specification discloses that the claimed right of access to the channel contains two paths, ACI and ATV. A1070–71, Figs. 4a–4c; A1072, 1:22–64; A1075, 8:63 – A1076, 10:41. Through the use of these two pathways, the ’751 Solution is able to control subscriber station access the channel and proactively avoid allowing too many subscriber stations attempting to transmit on the channel at the same time. A1072, 1:22–64; A2630. Chart 2 below distinguishes for the ’751 Solution activity that occurs prior to the grant of the right of access on the channel (i.e., above the gray line), and unclaimed activity that may occur ***post***-grant of right of access to the channel (i.e., below the gray line).

Chart 2: Embodiment 2, '751 Patent, Claimed Invention



A1069, Fig. 3c; A1070–71 Figs. 4a–4c; A1075, 8:63 – A1076, 10:41. Thus, the '751 Solution incorporated into the "right of access" claim limitation in Claims 6, 26, and 30 is directed to providing two discrete paths for a subscriber station to obtain a right of access to the channel ***before*** the subscriber transmits, and, importantly, ***before*** there can be a failed transmission.[13] *See* A1069, Fig. 3c; A1070–71 Figs. 4a–4c; A1075, 8:63 – A1076, 10:41.

[13] "Transmission" may more precisely be understood to comprise "attempted transmission," during which the subscriber station transmits energy on the channel. This results in either a "successful transmission" or a "failed transmission." Thus, under the '751 Solution, gaining a "right of access" enables a subscriber station to

Further, nothing in the prosecution history counters this plain meaning. *See supra* at Statement of the Case, II.A. *See also Microsoft*, 789 F.3d at 1298 ("The PTO should also consult the patent's prosecution history [for claim construction] in proceedings in which the patent has been brought back to the agency for a second review.") (internal citation omitted).

The Board's overly broad claim construction incorporating post-transmission activities into language relating only the rights of access should be reversed. *See Microsoft*, 789 F.3d at 1299 (vacating and remanding the Board's unpatentability determination because it "was based on an unreasonably broad construction").

B. Aside From ACI, The GSM References Do Not Disclose Structure To Permit "Right Of Access" To The Channel Post-Transmission

Applying the incorrect construction of "right of access" to the channel caused the Board to substantially err in holding that the GSM Specifications' use of persistence control to manage channel overload situations ***after*** a failed transmission, satisfies the '751 Solutions' ATV comparison introduced as a mechanism for gaining a "right of access" to the channel. *See Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1370 (Fed. Cir. 2008) (holding that for a reference to anticipate a claim, it must contain all limitations "arranged or combined in the

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make an "attempted transmission," but does not address what happens after that attempt.

same way as in the claim"); *In re Glatt Air Techniques*, 630 F.3d 1026, at 1029–30 (Fed. Cir. 2011) (holding that limitation (A) in the prior art that *remedies* a problem does not render obvious limitation (B) in an invention that *prevents* the problem).

First, by equating "right of access" in the claims to post-access "transmission" control in the GSM standard, the Board failed to account for the two distinct paths by which the '751 Solution teaches subscriber stations can be granted (or enabled) access to the channel. *See supra* Chart 2 at 23; A1077, 11:25–54 (Claim 6); A4900 (Claim 26); A4901 (Claim 30). For example, the Board held that:

> [I]t is beyond cavil that an inquiry regarding the value/existence of a random number associated with a mobile station must necessarily be accomplished in order to perform the random number comparison persistence control process described in both GSM references.

A5379. The Board is correct that both the GSM Specifications and the '751 Solution disclose an "inquiry regarding . . . a random number," but the "random number" process associated with GSM's persistence control occurs after grant of access to the channel and after a failed transmission on the channel. A2628–31; A4340–41; A4954–55; *see* A14. By stark contrast, the claimed ATV comparison occurs as part of the "right of access to the telecommunication channel" and *before* an overload problem has been detected. *See supra* Chart 2 at 23 (citing A1069, Fig. 3c; A1070–71 Figs. 4a–4c; A1075, 8:63 – A1076, 10:41); A1067, Abstract;

A1072, 1:31; A1076, 9:32-36; A1077, 11:4-5, 11:9, 11:39, 12:2-3, 12:35-36, 12:60-61; A1078, 13:19-20, 14:12-13.

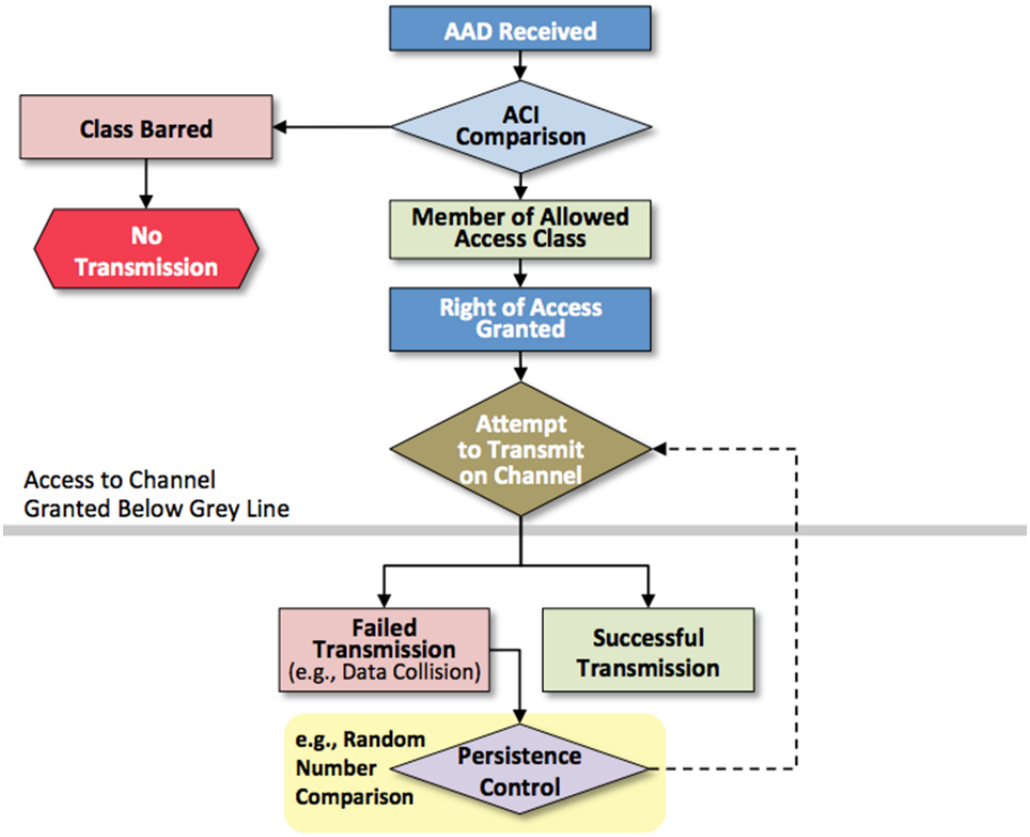
Persistence control according to the GSM Specifications has nothing to do with granting a subscriber station a ***right*** of access to the channel. Instead, the GSM persistence control simply restricts transmissions on the channel ***after*** a subscriber station already has been granted a right of access to the channel ***and after*** it has attempted a transmission, which has failed due to, e.g., channel overload. A2628–31; A4340–41; A4954–55. As Per Björndahl, IPCom's expert, testified:

> [O]nce a class of mobile stations is granted permission to access the network according to the broadcast "authorized access class" any of those mobile stations can begin sending PACKET CHANNEL REQUEST messages. If the class of mobile stations is sufficiently large, the chances are good that collisions will occur or be subject to some radio related distortion and that some of the mobile stations will need to retransmit their PACKET CHANNEL REQUEST messages. **The persistence algorithms** do not further limit the class of mobile stations that can send PACKET CHANNEL REQUEST messages, they **simply dictate the timing of those messages**.

A2630 (emphasis added).

Chart 1a below shows where GSM's persistence control (yellow highlighting) takes place ***after*** a subscriber station has been granted access to the channel:

Chart 1a: GSM Standard with Persistence Control *(Prior Art)*



See A2625–31; A4339–41; A4953–55; *see* A14.

Comparing Charts 1a (GSM) and 2 (the '751 Solution) demonstrate that control over the "right of access" (above the gray line) is conceptually different from control over the attempt to retransmit due to channel overload (below the gray line). *Compare supra* Charts 1a *with supra* Chart 2 at 23.

Failing to recognize the distinction between "grant of access to the channel" and management of re-transmissions on the channel caused the Board to fall into the same trap as the district court in *Net MoneyIN*. There, the panel reversed the district court by holding that in order to anticipate, "the prior art reference . . . must

not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements 'arranged as in the claim.'" 545 F.3d at 1369. The claim at issue recited a payment system that contained five "links" connecting various computers and servers. *Id.* at 1368–69. The district court erroneously held that a combination of two protocols found in a single prior art reference was enough to anticipate the claim because the protocols, when taken together, disclosed all five links. *Id.* at 1369. In reversing, this Court explained that "[n]either of these protocols contains all five links ***arranged or combined in the same way as claimed . . .*** ." *Id.* at 1371 (emphasis added).

Assuming, *arguendo*, that GSM's persistence control random number algorithm is the same as the '751 Patent's ATV comparison test, it is not enough – just as it was not enough in *Net MoneyIN* – to merely show that disparate limitations of a claim are present in the prior art. After all, "[v]irtually all inventions are combinations and virtually all are combinations of old limitations." *Environmental Designs, Ltd. v. Union Oil Co. of Calif.*, 713 F.2d 693, 698 (Fed. Cir. 1983). Instead, it must be shown that the limitations in the prior art are arranged in the same way they are recited in the claim. *Net MoneyIN*, 545 F.3d at 1371.

Here, the Board found an isolated reference to a random number comparison in the GSM Specifications and stopped there. A6–9; A15–16. The Board never

took the necessary next step required by *Net MoneyIN*, which was to determine if the GSM Specifications, or any other reference, taught or suggested using the random number comparison arranged or combined in the same way as required by Claims 6, 26, and 30, i.e., as a pathway, in addition to an ACI test, to a grant of channel access. A4302–03; A4378–79. *See Net MoneyIN*, 545 F.3d at 1369–70.

Even if the Board had followed the proper steps, the Claims would not be anticipated because the prior are does not teach or suggest the random number comparison arranged in the same manner as in the Claims. In fact, the random number comparison discussed in the GSM Specifications is found in a completely different section of the GSM Specifications than the sections that deal with rights of access. *Compare, e.g.*, A4339–40 *with* A4340–41. As further support, the '751 Patent recognizes persistence control may be used to manage network overload as an additional, optional, and entirely separate occurrence, *after* access to the channel has been granted:

> A relieve of the r30 [RACH or channel] can ***additionally*** [i.e., after grant of a right to access the channel has been given ***and*** transmission has been attempted] be attained by providing a repetition counter and/or a repeat interval [e.g., such as GSM's persistence control]. The repetition attempts allowed for ***re-sending*** a message from the corresponding mobile station to the base station 100 over the r30 [RACH or channel], ***in the event of collision*** [i.e., overload] with a message from another mobile station.

A1076, 10:24-29 (emphasis added).

Hence, the GSM Specifications do not disclose an evaluation unit that incorporates both an ACI path and an ATV path to access the channel as claimed by the Claims. Nor do the GSM Specifications disclose using an ATV comparison test (much less a persistence control analysis) for purposes of granting a "right of access" to the channel. The Board's finding to the contrary is wrong as a matter of law based on its erroneous construction of "right of access" and should be reversed. *See Net MoneyIN*, 545 F.3d at 1370; *In re Glatt Air Techniques*, 630 F.3d at 1029–30.

III. THE BOARD'S ERRONEOUS CONSTRUCTION OF "ASKING" "ON THE BASIS OF ACD" CAUSED IT TO HOLD CLAIM 26 ANTICIPATED AND OBVIOUS

The Board misconstrued the limitation of Claim 26 that requires the "evaluation unit for asking … on the basis of access class data [ACD] . . .whether" an ATV is present, (A4900), causing it to additionally erroneously hold Claim 26 both anticipated and obvious without finding all limitations present in the prior art. A7; A14–16. Ignoring the full language of the claim, the Board held that "on the basis of the access class data" to be "where access is initially determined on the basis of access class data, and thereafter based on random number comparison." A15.

Yet, the claim requires and evaluation unit for "asking … on the basis of access class data" whether there is an ATV present; an *access* threshold number

that can be used to "***grant***" access to at least one "telecommunications channel." The claim is not so broad as, as the Board suggests, as to cover anything that happens *after* the "asking" "on the basis of access class data." In addition, the claims simply "ask" whether an ATV is present that is capable of enabling access to the channel is present; not to "determine access." Therefore, by finding that GSM's post channel access persistence control is done on the basis of access class data, the Board incorrectly held Claim 26 anticipated and obvious. *See In re Glatt*, 630 F.3d at 1029–30 (Fed. Cir. 2011) (reversing Board because it failed to make a *prima facie* obviousness case where prior art reference did not contain one of the claimed elements).

A. "On The Basis of ACD" Is Not So Broad To Include Post-Transmission Activity That Does Not Consult ACD

Here, the Board legally erred in interpreting Claim 26 when it held:

> We interpret the claimed description of evaluating access requests "on the basis of the access class data," as described in Patent Owner's specification, to be ***almost exactly*** what is described in the cited GSM references, where ***access is initially determined*** **on the basis of ACD**, and ***thereafter*** based upon a random number comparison.

A15 (emphasis added). The Board: (1) ignored the plain meaning of the phrase "on the basis of ACD," and equated that phrase with anything that occurs *after* performing an ACD access test, even after access to the channel is granted; and (2) ignored the plain language of the claim, which does *not* require an ATV

comparison, but instead requires only that the evaluation unit ***ask if*** an ATV bit is present for comparison. A4900 (Claim 26).

1. "On The Basis of ACD" Does Not Mean Anything "Performed After An ACD Test"

The plain meaning of the words "on the basis of [ACD]" requires more than anything occurring "after an ACD test." If the drafters had desired to draft Claim 26 so broadly, they would have. *See In re Zletz*, 893 F.2d at 321 ("When the applicant states the meaning that the claim terms are intended to have, the claims are examined with that meaning . . . .") (internal citation omitted); *but see* A6 (recognizing that the claims mean what they say, "Patent Owner was free to amend the claims to so limit that language and did not do so"). Instead, the drafters chose to use the claim language "***asking … on the basis of [ACD]***, whether the [AAD] includes an [ATV] ***for*** comparison . . . ." A4900 (Claim 26) (emphasis added). Based on the plain meaning of that language, the "asking" depends upon the information encoded in the ACD. A4900. *See In re Zletz*, 893 F.2d at 322 (holding the Board erred by importing limitations contrary to plain words of claim).

In stark contrast, the Board's interpretation broadens "on the basis of" to simply mean anything that happens *after* a subscriber station grants access based on ACD, regardless of the relationship between the ACD and the subsequent event. A7; A15. However, it is improper to broaden a limitation so much as to remove its

value. *See Microsoft*, 789 F.3d at 1299. By contrast to the plain meaning, the Board's interpretation requires access to be granted to the network based on ACD, and then *requires* a random number comparison: "***access is initially determined* on the basis of ACD**, and ***thereafter*** based upon a random number comparison." A15 (emphasis added).

Claim 26, on its face, does not require access to be only "initially determined on the basis of ACD", as the Board read this claim. *See, e.g.*, *supra* Chart 2 at 23. If it did, the alternate pathway for gaining access would be unnecessary. Nor does it require access to be determined based on ATV (i.e., the Board's random number comparison). *See id.* Instead Claim 26 provides the structure that is capable of asking if access can be granted based on ACD. In the event that access is not initially determined on the basis of ACD, Claim 26 also requires checking the bit structure to determine if access can be granted based on ATV. A4900; A1075, 8:6–12, 8:19–27, 8:50–54; A1076, 9:2–10. Indeed, in the process disclosed by the '751 Solution, only when access is *denied* based on ACD does the evaluation unit moves to an ATV comparison. A1076, 9:44–67; *see supra* Chart 2 at 23.

By broadening the limitation, the Board ignores that, at minimum, "on the basis of" requires that the ACD must factor into asking if the ATV is present:

> "asking . . . ***on the basis of the access class data [ADC, ACI]***, whether the access authorization data [AAD] include an access threshold value [ATV] for comparison of the access threshold value [ATV] with a random number . . . .

A4900 (Claim 26) (emphasis added).

For example, if a subscriber station asks if the AAD includes an ATV completely independent of ACD, then this limitation is not met. Similarly, performing any random number comparison *after* the unit determines access to the network is not covered by Claim 26. Claim 26 does not cover post-access actions. A4900 (Claim 26); *see also* A1072, 1:22–64; *supra* Chart 2 at 23. *See, e.g.*, *Zletz*, 893 F.2d at 321.

Taken to its logical end, the Board's interpretation of "on the basis of ACD" to encompass anything "after the event occurs," also covers the very data collisions that may occur after access to a channel is granted, and for which GSM's persistence control is designed to minimize. *See* A7; A15. Under the Board's logic, these data collisions that prevent transmission on the channel also are "on the basis of ACD," because there could be no collisions without first being granted access through ACD. *See* A7; A15. The Board's strained interpretation, which is not supported by any record evidence, is thus wrong.[14] *See Microsoft*, 789 F.3d at 1299.

[14] The trigger for the persistence control techniques disclosed in the GSM Specifications is a data overload ***after*** access has been granted to a channel and an attempted transmission has failed. *See* A2628–31; A4340–41; A4954–55; A14. On the other hand, the driving factor for ATV comparison in the '751 Solution is information taken from a direct analysis of the ACI ***before*** access has been granted to the channel. A1069, Fig. 3c; A1070–71 Figs. 4a–4c; A1075, 8:63 – A1076, 10:41; s*ee also supra at* Statement of the Case, II.A.

2. The Specification Supports The Plain Meaning Of "On The Basis of ACD"

The '751 specification discloses the makeup of the AAD as including both Access Threshold Value bits and Access Class bits:

> In a second exemplary embodiment, in FIG. 3c a third [AAD] bit pattern 55 that has a bit length of 13 bits is transmitted along with the information signals from the base station 100 to the mobile stations 5, 10, 15, 20. The third bit pattern 55 has no evaluation bit S4 and therefore includes both the access threshold value [ATV] bits S3, S2, S1, S0 and the access class bits [ACD] Z3, Z2, Z1, Z0.

A1075, 8: 6-12; A1069, Fig. 3c.

The evaluation unit 60 looks specifically to the ACD (ACI) data bit in the AAD to determine whether it has the ability to attempt to access the network using the alternate ATV path:

> Both mobile stations that belong to a user class whose associated access channel [sic, class] bit [ACD] is set to 1 and mobile stations that do not belong to any user class [ACD], must perform the access threshold value [ATV] evaluation . . . .

A1075, 8:19-27; A1069, Fig. 3c.[15]

Thus by looking at the content of the ACD, the evaluation unit determines whether it needs to look at and perform an ATV comparison test. A1075, 8:19-27; A1069, Fig. 3c.

[15] Access channel bits and user classes are determined by the ACD [ACI] in the bit string. A1075, 8:50-54; A1069, Fig. 3c.

The Board's erroneous interpretation of "on the basis of [ACD]" to encompass any action after the subscriber station grants access to the channel is legal error requiring reversal.

3. "Asking Whether the AAD includes an ATV" Does Not Mean "Evaluating" An Access Request

The Board legally erred in construing the "asking" limitation of Claim 26 to require "evaluating access requests." *See* A15 ("We interpret the claimed description of evaluating access requests . . . [to be] . . . where access is ***initially determined*** on the basis of ACD, and ***thereafter based upon*** a random number comparison") (emphasis added). However, the plain language of Claim 26 merely requires "asking . . . ***whether the AAD includes ATV***" (emphasis added), i.e., whether the bit structure directing the evaluation unit to perform an ATV comparison was delivered. A4900; *see* A1069–70, Figs. 4a–4c; A1075, 8:63 – A1076, 10:41. "Asking" does not mean "evaluating."

The Board, however, defined this limitation to require an ATV comparison (assuming *ipso facto*, that such a comparison was the same as a persistence control comparison).[16] However, "asking" the question "whether the AAD includes an ATV" is a predecessor step to performing an ATV comparison. Indeed, the

[16] The Board equates the random number comparison done with ATV prior to grant of network access with the persistence control comparison done in GSM after grant and transmission. A15.

purpose for the "asking" step is set forth later in the claim. A4900 (Claim 26) (to determine whether "an access threshold value for comparison . . . with a random number . . . for ascertaining, as a function of an outcome of a comparison whether an access of the . . . subscriber station to the . . . channel is enabled.").

The Board legally erred when it interpreted the requirement of asking a question of "whether the AAD includes an ATV" to mean "perform the random number comparison persistence control process." A7; *accord* A15. Rather, the "asking" is done to determine the novel question of which of the alternate channel access paths, ATV Comparison or ACD Information, the subscriber station is going to try. *See* A1069–70, Figs. 4a–4c; A1075, 8:63 – A1076, 10:41.

B. The Board Erred In Finding Claim 26 Unpatentable Because In GSM, ACD Does Not Factor Into Persistence Control

By construing asking "*on the basis of ACD*" so broadly as to include any action that happens *after* a base station enables access based on ACD, the Board improperly failed to give meaning to the words "on the basis of" and to do an element-by-element analysis to determine whether the GSM Specifications anticipated or rendered obvious Claim 26. *See Net MoneyIN*, 545 F.3d at 1370; *In re Glatt*, 630 F.3d at 1029–30. Instead, the Board held simply that:

> We interpret the claimed description of ***evaluating access requests*** … as described in Patent Owner's specification, to be almost exactly what is described in the cited GSM references where access is initially determined based on access class data, and thereafter based on random number comparison.

A15. However, the Board's interpretation is both legally incorrect for Claim 26, as described above, and factually incorrect for the cited GSM references to which it refers. *See, e.g.*, A4339–41.

In the GSM Specifications, besides always coming before it, ACD never factors into the persistence control random number test. *See* A4339–40; A4953–54. Rather, the subscriber station always looks at (that is, "asks") whether the AAD ("PRACH Control Parameters IE") includes a random number (i.e. Persistence Level) completely independently of the ACD. *See* A4430–32 (tables from the March Specification showing ACD bit (ACC_CONTR_CLASS) separate and distinct from PERSISTENCE_LEVEL bit); *see also* A4910 ("In particular, [the March Specification] taught that the network would send PRACH Control Parameters that might or might not include a PERSISTENCE_LEVEL. . . . To determine whether that parameter was present, the mobile station would examine a flag bit. If it was 'H,' a PERSISTENCE_LEVEL was present; if 'L,' it was not."). Therefore, contrary to the Board's conclusion, the '751 Solution is quite different from the GSM Specifications, which, as shown above, do not perform persistence control, much less an ATV comparison, on the basis of ACD. Because the Board failed to account for all of the limitations in Claim 26, choosing instead to equate disparate functions, this case should be reversed. *See Net MoneyIN*, 545 F.3d at 1369–71; *In re Glatt*, 630 F.3d at 1029–30.

IV. CONCLUSION

Under the proper claim construction, taking all of the claim limitations into account, the GSM Specifications fail to anticipate or render obvious the '751 Solution; hence the Court should reverse the Board's finding that Claims 6, 26 and 30 are obvious and/or anticipated.

/s/ Meredith Martin Addy

Meredith Martin Addy
(*Principal Counsel*)
Matthew M. Holub
KATTEN MUCHIN ROSENMAN LLP
525 W. Monroe Street
Chicago, IL 60661
(312) 902-5200

Jeffrey A. Finn
KATTEN MUCHIN ROSENMAN LLP
2029 Century Park East
Suite 2600
Los Angeles, CA 90067
(310) 788-4494

Attorneys for Appellant IPCom GmbH & Co.

Dated: September 16, 2015

ADDENDUM

TABLE OF CONTENTS

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HTC CORPORATION
Requester and Respondent

v.

IPCOM GMBH & CO.
Patent Owner and Appellant

Appeal 2014-003314
Reexamination Control 95/001,193
Patent US 7,043,751 B1
Technology Center 3900

Before RICHARD M. LEBOVITZ, MARC S. HOFF, and ANDREW J. DILLON, *Administrative Patent Judges*.

DILLON, *Administrative Patent Judge*

DECISION ON APPEAL

STATEMENT OF THE CASE

Patent Owner appeals under 35 U.S.C. § 134(b) (2002) from the final decision of the Examiner adverse to the patentability of claims 1-26, and 30. We have jurisdiction under 35 U.S.C. § 315 (2002).

We affirm.

Invention

The '751 patent describes a method and system for allocating rights of access to a telecommunications channel of a telecommunications network to at least one subscriber station.

Claims

Claims 1-26 and 30 are subject to reexamination and have been rejected by the Patent Examiner. Claims 1-13 are original patent claims. Claims 14-30 were added during the reexamination proceeding. Claims 27-29 and 31 have been canceled. Claims 1, 6, 7, 9-14, 19, 22, 25, 26, and 30 are independent.

Claim 1 is illustrative.

1. A method for allocating rights of access to at least one telecommunications channel usable by a plurality of subscriber stations in common, of a telecommunications network to at least one subscriber station (5,10,15,20) of a telecommunications network, comprising the steps of transmitting information signals to at least one subscriber station (5, 10, 15,20); transmitting with the information signals, access authorization data (45,50,55) to the at least one subscriber station (5, 10, 15,20); upon reception of the access authorization data (45,50,55) in an evaluation unit (6) of the at least

one subscriber station (5, 10, 15, 20), asking a question whether the access authorization data (45, 50, 55) include an access threshold value (S), and comparing the access threshold value (S) with a random number or a pseudo-random number (R); and granting a right of access to a telecommunications channel of the at least one subscriber station (5, 10, 15,20) as a function of an outcome of the comparison.

Prior Art

GSM 04.60 V2.0.0 Specification, European Telecommunications Standards Institute (ETSI) March 03, 1998. (hereinafter "March 1998 GSM Specification")

GSM 04.60 V6.2.0 Specification, European Telecommunications Standards Institute (ETSI), October 1998. (hereinafter "October 1998 GSM Specification")

Wright	US 6,078,568	June 20, 2000
Chuah	US 6,400,695 B1	June 04, 2002
DuPont	WO 97/19525	May 29, 1997

Owner's Contentions

Patent Owner contends that the Examiner erred in entering the following grounds of rejections against claims 1-26 and 30 (App. Br. 7):

A. The rejection of claim 26 under 35 U.S.C. § 103(a) as obvious over the March 1998 GSM Specification or the October 1998 GSM Specification; (RAN, Grounds AS and AT)

B. The rejection of claim 30 under 35 U.S.C. § 103(a) as obvious over the March 1998 GSM Specification or the October 1998 GSM Specification; (RAN, Grounds AW and AX)

C. The rejection of claim 6 under 35 U.S.C. § 103(a) as obvious over the March 1998 GSM Specification or the October 1998 GSM Specification; (RAN, Grounds K and L)

D. The rejection of all independent claims, and thus all claims, under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a) as either anticipated by, or obvious over, either the March 1998 GSM Specification, or the October 1998 GSM Specification, based upon an alleged erroneous interpretation of the claim language: "asking whether the access authorization data include an access threshold value"; (RAN, Grounds A-AX)

E. The rejection of all independent claims, and thus all claims, under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a) as either anticipated by, or obvious over, either the March 1998 GSM Specification, or the October 1998 GSM Specification, based upon an alleged erroneous interpretation of the claim language “right of access” and “access. . . is enabled.” (RAN, Grounds A-AX)

ANALYSIS

Patent Owner argues, with respect to claim 26, that the language of the claim requires that the station ask "on the basis of access class data, whether to access the channel dependent on or independent of an ATV" (Access Threshold Value). App. Br. 11.

Similarly, with respect to claims 30 and 6, Patent Owner argues that a proper interpretation of these claims requires that access be granted via one of two alternative access paths, either by utilizing a random number comparison or by a class limitation. *Id.*

Patent Owner attempts to distinguish the claimed invention of claims 6, 26 and 30 from the March 1998 GSM Specification and the October 1998 GSM Specification by urging that both GSM references only teach access control by means of a class barring procedure, and that thereafter, in the event of a collision, a re-access procedure takes place for mobile stations which have previously been granted access, utilizing a random number comparison persistence control.

Third Party Requester argues that the proper interpretation of these claims, as construed by the Examiner, is consistent with the claim construction set forth by the District Court in the related litigation. Specifically, Third Party Requester argues that each claim merely requires "asking" whether an Access Authorization Data (AAD) received includes an Access Threshold Value (ATV). Third Party Requester observes that the '751 patent teaches that the network may omit information when sending an AAD to subscriber stations and that an AAD may include or omit an ATV, citing column 8, lines 61-62. 3PR App. Br. 4-5.

We find the Examiner's interpretation of these claims to be reasonable, and we find no error in that interpretation.

Patent Owner continually urges that the claimed invention set forth in claims 6, 26 and 30 requires that access be granted based upon either AAD or, alternatively, on the basis of the ATV. Patent Owner's attempted distinction between claimed invention and both the March 1998 GSM Specification and the October 1998 GSM Specification is based upon the argument that those references only teach that "access" is granted by means of class barring and that the use of a random number comparison persistence control (ATV) process only occurs in the event of a collision for a mobile station that had previously been granted "access," and is only utilized to control a "subsequent access" by a mobile station that has previously been granted "access." Patent Owner urges this is not "access control" but rather control of "the second and subsequent attempts to access a channel." App. Br. 17.

We find that Patent Owner's attempted distinction between "access" and "second and subsequent attempts to access" not to be persuasive that the Examiner erred by finding that both the March 1998 GSM Specification and the October 1998 GSM Specification teach or suggest the use of both AAD (class) and ATV (random number comparison persistence control). In summary, we find no evidence within the '751 Patent that Patent Owner intended to limit the definition of "access" to "initial access." Patent Owner was free to amend the claims to so limit that language and did not do so. Consequently, under a broad but reasonable interpretation, we find that both "access" and "subsequent access" meet the argued claim limitation.

We find similarly unpersuasive Patent Owner's argument regarding the failure of the GSM references to disclose "asking" about an ATV. We note that the use of a random number comparison persistence control for subsequent access control necessitates an inquiry regarding the random number associated with the mobile station, which is utilized to perform the random number comparison persistence control process. We find this to be, at the very least, suggestive of "asking" about an ATV.

We therefore find that the Examiner did not err in rejecting claims 6, 26 and 30 under 35 U.S.C. § 103(a) as unpatentable over either the March 1998 GSM Specification, or the October 1998 GSM Specification.

Owner argues that the Examiner erred in rejecting all independent claims (and thus all claims) by failing to properly find that the cited GSM references teach "asking whether the AAD include an ATV for purposes of pursuing the random comparison access path." App. Br. 23.

For the same reasons we set forth above, we find this argument unpersuasive. It is beyond cavil that an inquiry regarding a random number associated with a mobile station must be accomplished in order to perform the random number comparison persistence control process described in the GSM references.

We therefore find that the Examiner did not err in finding that the GSM references teach or suggest the "asking whether the AAD include an ATV for purposes of pursuing the random comparison access path" in the rejection of all independent claims under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a) as either anticipated by, or unpatentable over, both the March 1998 GSM Specification and the October 1998 GSM Specification.

Finally, Patent Owner argues that the Examiner erred in rejecting all independent claims (and thus all claims) by erroneously interpreting the claim terminology "granting a right of access" and "access . . . is enabled." *Id.* at 25.

In detail, Patent Owner urges that the '751 patent "clearly and expressly discloses" that "access" relates specifically to "permitting an initial sending of a message on the channel" pointing to an absence of any discussion in the '751 Specification of retransmission of messages, or persistence control. *Id.* at 26.

It is well settled that "[W]hen interpreting a claim, words of the claim are generally given their ordinary and accustomed meaning, unless it appears from the specification or the file history that they were used differently by the inventor." *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (citing *Carroll Touch, Inc. v. Electro Mech. Sys., Inc.,* 15 F.3d 1573, 1577 (Fed. Cir. 1993)).

We find that Patent Owner has failed to point to any specific portion of the '751 Specification which would lead us to conclude that Owner intended to limit the claimed recitation of "access" to apply only to an initial attempt to access. We decline to draw any inference from the cited lack of any discussion of retransmission of messages in the patent specification, noting that "retransmission" is not particularly germane to a discussion of "access" since "retransmission" may occur immediately after the initial transmission, while the mobile station is still accessing the channel.

We conclude the Examiner has properly interpreted "granting a right of access" and "access . . . is enabled" in the rejection of all independent

claims under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a) as either anticipated by, or unpatentable over, either the March 1998 GSM Specification, or the October 1998 GSM Specification

In view of our conclusion that the Examiner did not err in rejecting the appealed claims based on the March 1998 GSM Specification, and the October 1998 GSM Specification, we do not address any of the other rejections upon which the Examiner relies or which are asserted by Requester. *See In re Gleave*, 560 F.3d 1331, 138 (Fed. Cir. 2009).

Summary/Conclusion

We sustain the Examiner's rejections of claims 1-26 and 30.

DECISION

The Examiner's decision adverse to the patentability of claims 1-26 and 30 is affirmed.

Requests for extensions of time in this proceeding are governed by 37 C.F.R. §§ 1.956 and 41.79(e).

AFFIRMED

Appeal 2014-003314
Reexamination Control 95/001193
Patent US 7,043,751 B1

ack

Patent Owner:

KILPATRICK TOWNSEND & STOCKTON LLP
1100 PEACHTREE STREET
SUITE 2800
ATLANTA, GA 30309

Third Party Requester:

PERKINS COIE LLP
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HTC CORPORATION
Requester and Respondent

v.

IPCOM GMBH & CO.
Patent Owner and Appellant

Appeal 2014-003314
Reexamination Control 95/001,193
Patent US 7,043,751 B1
Technology Center 3900

Before RICHARD M. LEBOVITZ, MARC S. HOFF, and ANDREW J. DILLON, *Administrative Patent Judges*.

DILLON, *Administrative Patent Judge*

DECISION ON REQUEST FOR REHEARING

STATEMENT OF THE CASE

Patent Owner filed a Request for Rehearing on July 28, 2014 under 37 C.F.R §41.79(a)(1) from the Decision on Appeal of the Patent Trial and Appeal Board (hereinafter "Board") mailed June 27, 2014 (hereinafter "Decision"). In the Decision we affirmed the Examiner's rejection of claims 1-26 and 30. Patent Owner alleges that the Board erred by misapprehending or overlooking the arguments presented in the Brief.

We summarize Patent Owner's allegations of error as follows:

1. An allegation that the Board's decision with respect to claim 26 "was premised on erroneous findings that the cited art suggests asking, on the basis of the class data, whether the authorization data include a threshold value for a random number comparison" by failing to address the pivotal meaning of the phrase "on the basis of the access class data;"
2. An allegation that the Board's decision utilized "an improper interpretation of the phrases 'right of access' and "access . . . is enabled;" and,
3. An allegation that the Board's decision erroneously interpreted the "asking steps" in all claims as "merely requiring asking whether the access authorization data *includes* an access threshold value."

Consequently, Patent Owner requests a rehearing of the Board's Opinion affirming the rejection of claims 1-26 and 30. Req. Reh'g 10.

We have carefully reviewed the Decision in light of Patent Owner's allegations of error.

ANALYSIS

With respect to claim 26, Patent Owner argues that the language of that claim requires the "evaluation unit of the mobile station be asking something *on the basis of access class data.*" Patent Owner asserts that the proper interpretation of the claim language requires: "that the result of asking whether the access authorization data includes an access threshold value for comparison must depend on the access class data. Req. Reh'g 3.

In contrast, Patent Owner urges that Requester's position that this claim language requires "whether or not to ask at all must depend on the access class data" is erroneous. *Id.*

Patent Owner argues that the Board misapprehended the correct interpretation of claim 26 which states:

> the evaluation unit for asking when information signals which contain access authorization data that encode an access threshold value and include access class data that corresponds to a plurality of user classes are received, *on the basis of the access class data,* whether the access authorization data include an access threshold value for comparison of the access threshold value with a random number or a pseudo-random number.

Patent Owner argues that the express wording of this claim requires "an evaluation that asks something based on received *access class data."* That is, it is Patent Owner's position that the received access class data must be used in determining the result of the asking, i.e. the access class data must be utilized to determine whether or not the access authorization data includes a value for comparison with a number. *Id.* at 4.

In support of this position, Patent Owner argues that Requester's interpretation, that the "asking" is based upon access class data, is not

consistent with the specification. Patent Owner points to the two embodiments described in Figures 3a-3c, noting that neither embodiment uses access class data to determine whether to ask a question about received data. Patent Owner urges that in the first embodiment (Figs. 3a-3b), the access class information is not utilized to determine whether or not to ask any question, and in the second embodiment (Fig. 3c), the access class bits provide the result of asking the question of whether there is an access threshold value that must be utilized in a random number comparison. Thus, Patent Owner argues, if the claim is properly interpreted to require that the evaluation unit ask whether the access authorization data include an access threshold value for comparison where the result of that asking depends upon the access class information. *Id.* at 4-6.

Requester, in response to Patent Owner's request, urges that claim 26 merely requires that the access class data be used to determine whether the Access Threshold Value ("ATV") is included, in the manner taught by the cited prior art. Opp. to Req. Reh'g. 3.

As noted in the Decision (page 6.), each claim is directed to granting access to a telecommunications channel and Patent Owner does not distinguish between "access" and "subsequent access" in the appealed claims, leading us to the conclusion that these claims can be read upon the subsequent access procedure taught by the prior art. The March 1998 GSM Specification and the October 1998 GSM Specification both teach that access is initially granted by class barring techniques and that subsequent access, in the event of a collision, is determined by random number comparison. As expressed in the Decision, at page 7, we find that an inquiry regarding a random number associated with a mobile station must necessarily be accomplished in order to perform the

random number comparison persistence control process described in both GSM references.

Further, in response to a withdrawn rejection regarding support for the claimed phrase "on the basis of the access class data," Patent Owner cited the specification of the '751 Patent, which describes the use of the telecommunication channel by particular users of a "predetermined user class," such as police or fire departments ('751 Patent, col. 1, ll. 45-64, cited in Comments Filed in Response to an Action Closing Prosecution dated May 31, 2012).

We interpret the claimed description of evaluating access requests "on the basis of the access class data," as described in Patent Owner's specification, to be almost exactly what is described in the cited GSM references, where access is initially determined on the basis of access class data, and thereafter based upon random number comparison. As we have interpreted this phrase as described in Patent Owner's specification, we decline to disturb our previous finding.

Next, Patent Owner urges error on our part by alleging we have misapprehended the meaning of "right of access" and "access . . . is enabled" as encompassing both an initial sending and a resending of a message in a manner that is inconsistent with the '751 Patent specification. In support of this position, Patent Owner relies upon column 10, lines 24-37 of the '751 Patent specification, which describes a repetition counter and repeat interval which Patent Owner argues are not part of the bit pattern of "access" rights granted. Req. Reh'g. 8.

We initially note that the cited portion of the '751 Patent specification relied upon by Patent Owner, on its face, describes what we believe to be an

alternative approach, i.e. "can additionally be attained by . . ." Further, the description that the repetition counter and/or repeat interval may be utilized "[t]ogether with the bit pattern of access rights granted" seems to imply that the repetition counter and/or repeat interval form part of the "access" rights, rather than a separate mechanism. Absent some *evidence* (beyond mere attorney argument) that the repetition counter and/or repeat interval do not form part of the "access" mechanism, we find no error in the Decision..

Finally, Patent Owner argues that the Board erred in rejecting claims 13, 14, 19, 22, 26, and 30 by not addressing the "for comparison" language in those claims. Patent Owner argues that the language in these claims specifically requires that "the evaluation unit be configured for asking whether an access threshold value is *to be used* in a comparison with a random number to enable channel access." Req. Reh'g. 9.

The Decision noted our belief that it is beyond cavil that an inquiry regarding the value/existence of a random number associated with a mobile station must necessarily be accomplished in order to perform the random number comparison persistence control process described in both GSM references. We therefore found that the Examiner did not err in finding that the cited prior art references necessarily teach "asking" in the manner claimed. For this reason we decline to modify our original finding.

We are therefore satisfied that all arguments timely submitted by Patent Owner and Requester in the Briefs were adequately addressed in the original Decision. We have consequently found that Patent Owner has not shown that the Board erred in misapprehending or overlooking those identified arguments previously raised in the Briefs. Therefore, we maintain

our position as set forth in the Decision that Patent Owner has not shown error in the Examiner's rejection of claims 1-26 and 30.

CONCLUSION

In view of the foregoing discussion, we decline to modify our decision in this Appeal. Consequently, we deny Patent Owner's Request for Rehearing with respect to making any changes therein.

DENIED

Appeal 2014-003314
Reexamination Control 95/001193
Patent US 7,043,751 B1

ack

Patent Owner:

KILPATRICK TOWNSEND & STOCKTON LLP
1100 PEACHTREE STREET
SUITE 2800
ATLANTA, GA 30309

Third Party Requester:

PERKINS COIE LLP
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

(12) **United States Patent**
Fischer et al.

(10) **Patent No.: US 7,043,751 B1**
(45) **Date of Patent: May 9, 2006**

(54) **METHOD OF ALLOCATING ACCESS RIGHTS TO A TELECOMMUNICATIONS CHANNEL TO SUBSCRIBER STATIONS OF A TELECOMMUNICATIONS NETWORK AND SUBSCRIBER STATION**

(75) Inventors: **Ralf Fischer**, Bad Salzdetfurth (DE); **Martin Hans**, Hildesheim (DE); **Frank Kowalewski**, Salzgitter (DE); **Josef Laumen**, Hildesheim (DE); **Gunnar Schmidt**, Wolfenbuettel (DE); **Detlef Lechner**, Berlin-Tempelhof (DE)

(73) Assignee: **Robert Bosch GmbH**, Stuttgart (DE)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/914,967**

(22) PCT Filed: **Feb. 15, 2000**

(86) PCT No.: **PCT/DE00/00431**

§ 371 (c)(1),
(2), (4) Date: **Sep. 6, 2001**

(87) PCT Pub. No.: **WO00/54534**

PCT Pub. Date: **Sep. 14, 2000**

(30) **Foreign Application Priority Data**

Mar. 8, 1999 (DE) 199 10 239

(51) **Int. Cl.**
G06F 7/04 (2006.01)

(52) **U.S. Cl.** **726/7**; 726/6; 726/5; 726/4

(58) **Field of Classification Search** 713/176, 713/184; 380/240; 370/229, 225, 228; 379/93.02; 726/4, 5, 6, 7
See application file for complete search history.

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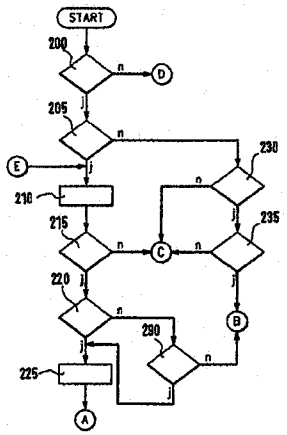
Primary Examiner—Norman M. Wright
(74) *Attorney, Agent, or Firm*—Michael J. Striker

(57) **ABSTRACT**

A method and a subscriber station for allocating rights of access to a telecommunications channel of the telecommunications network to at least one subscriber station (**5**, **10**, **15**, **20**) are proposed in which information signals are transmitted to the at least one subscriber station (**5**, **10**, **15**, **20**). With the information signals, access authorization data (**45**, **50**, **55**) are transmitted to the at least one subscriber station (**5**, **10**, **15**, **20**). Upon reception of the access authorization data (**45**, **50**, **55**) in an evaluation unit (**6**) of the at least one subscriber station (**5**, **10**, **15**, **20**), the question is asked whether the access authorization data (**45**, **50**, **55**) include an access threshold value (S), and the access threshold value (S) is compared with a random number or a pseudo-random number (R), and the right of access to a telecommunications channel of the at least one subscriber station (**5**, **10**, **15**, **20**) is granted as a function of the outcome of comparison.

13 Claims, 3 Drawing Sheets



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* cited by examiner

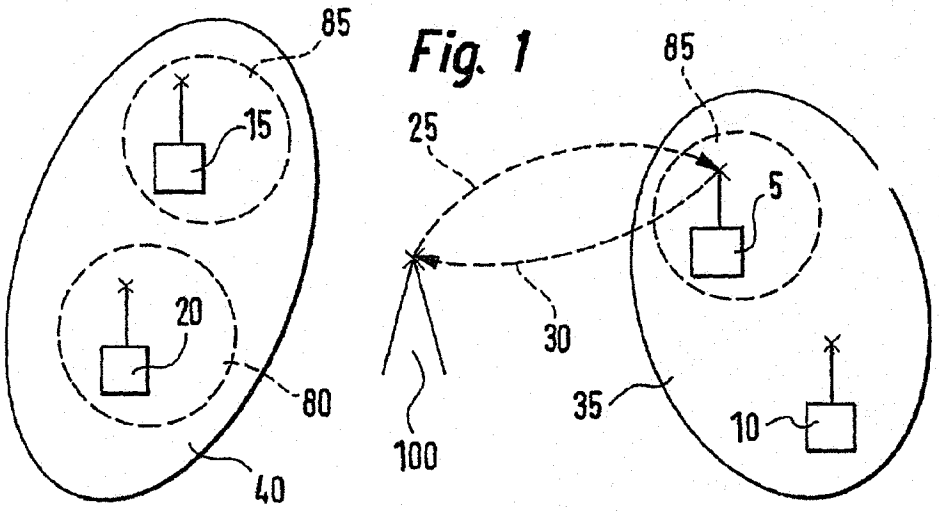


Fig. 1

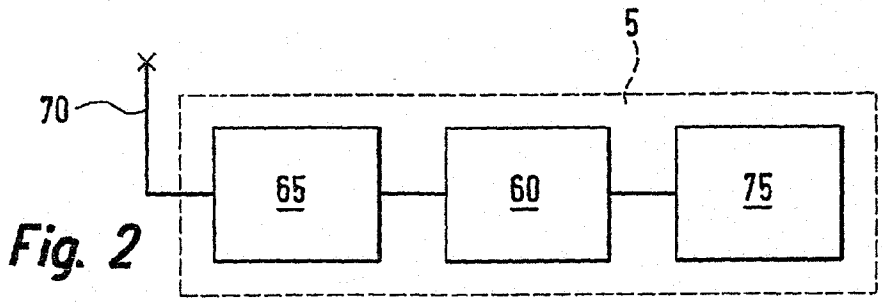


Fig. 2

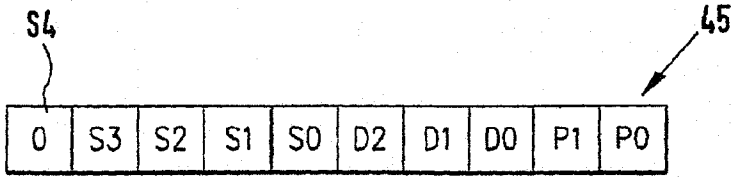


Fig. 3a

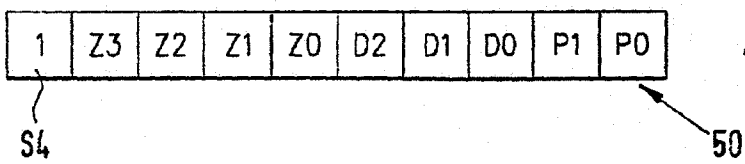


Fig. 3b

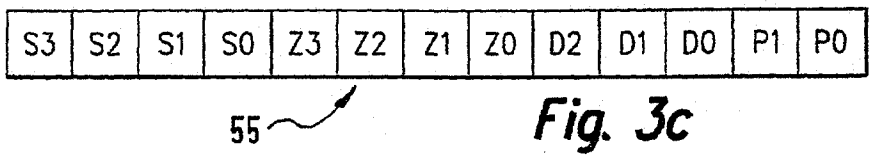
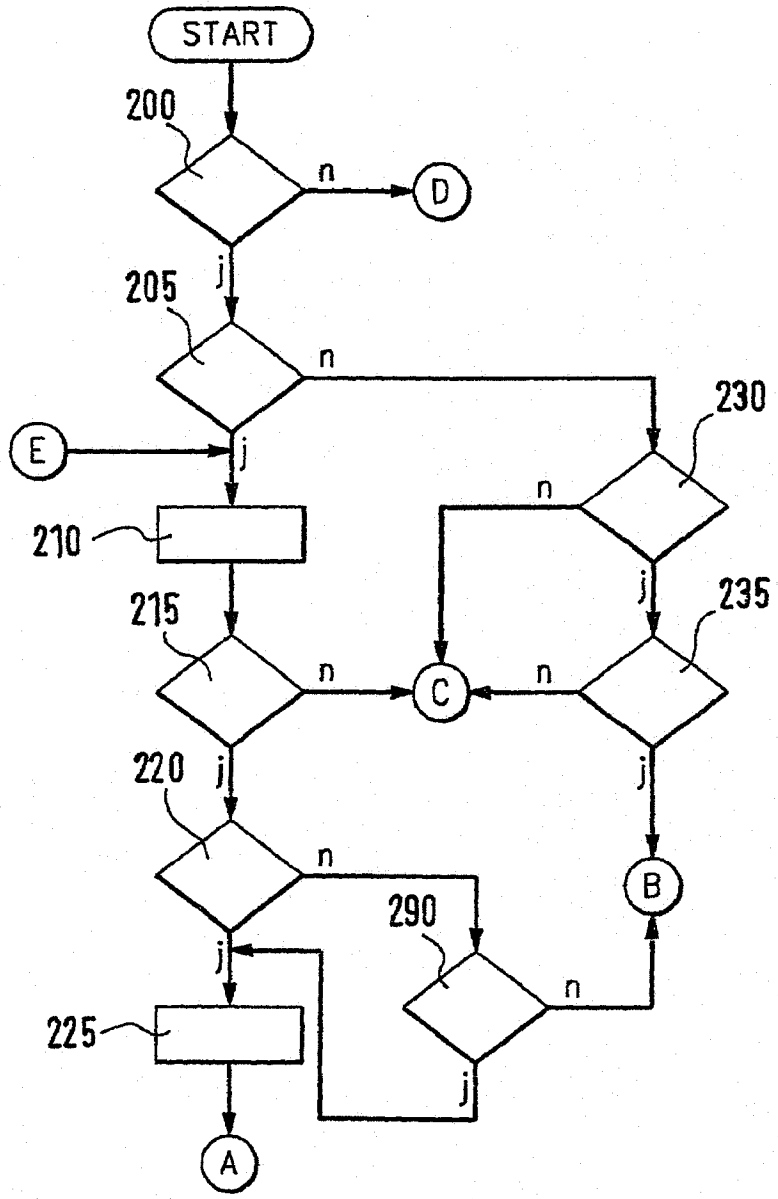


Fig. 3c


START
200
n
D
j
205
n
230
E
j
n
210
j
235
215
n
C
n
220
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j
n
B
290
j
n
225
j
A

Fig. 4a

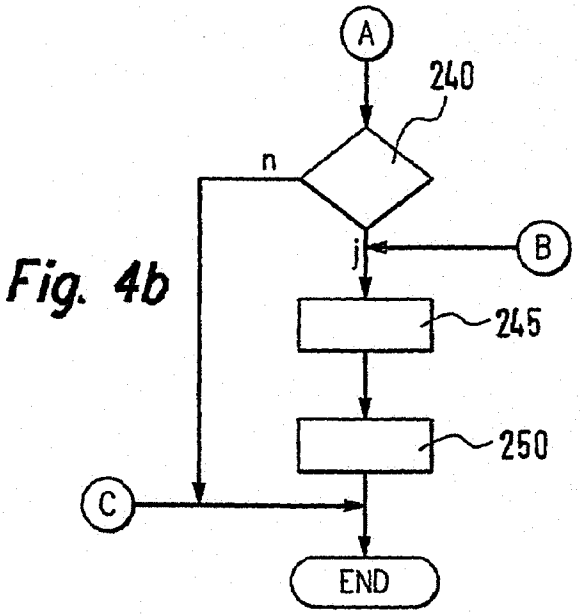


Fig. 4b

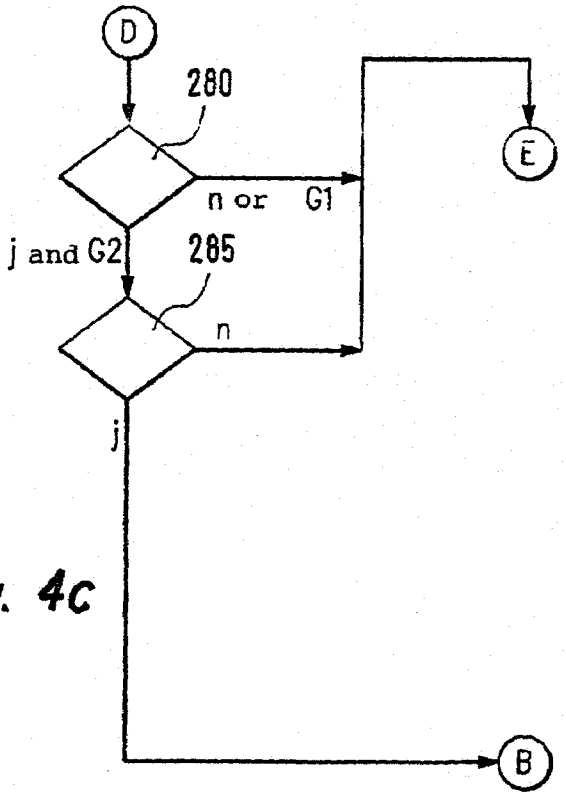


Fig. 4c

METHOD OF ALLOCATING ACCESS RIGHTS TO A TELECOMMUNICATIONS CHANNEL TO SUBSCRIBER STATIONS OF A TELECOMMUNICATIONS NETWORK AND SUBSCRIBER STATION

BACKGROUND OF THE INVENTION

The invention is based on a method of controlling or administering access to a telecommunications channel for a subscriber station.

From German Patent Application Serial No. 19838832.2, not yet published by the priority date of the present application, a method for controlling access to a telecommunications channel of a telecommunications network for at least one subscriber station of the telecommunications network is known in which information signals are transmitted to the at least one subscriber station.

SUMMARY OF THE INVENTION

The method of the invention and the subscriber station of the invention have the advantage over the prior art that with the information signals, access authorization data are transmitted to the at least one subscriber station; that upon reception of the access authorization data in an evaluation unit of the at least one subscriber station, the question is asked whether the access authorization data include an access threshold value, and the access threshold value is compared with a random number or a pseudo-random number; and that the right of access to a telecommunications channel of the at least one subscriber station is granted as a function on the outcome of comparison, preferably on the condition that the random number or the pseudo-random number is greater than or equal to the access threshold value. In this way, a random distribution of the access authorization to this telecommunications channel for one or more subscriber stations can be achieved. This access control takes up a minimum of transmission capacity for transmitting the information signals, since it is effected merely by transmitting the access threshold value.

By the provisions recited in the dependent claims, advantageous refinements of and improvements to the method defined by independent claim 1 are possible.

It is especially advantageous that in the evaluation unit of the at least one subscriber station, the question is asked whether the access authorization data include access authorization information with access class information for at least one predetermined user class, in which case, and on the condition that the at least one subscriber station is assigned to the at least one predetermined user class, to which access to a telecommunications channel of the at least one subscriber station is granted as a function of the access class information for this user class. In this way, subscriber stations of a predetermined user class are allowed to use the telecommunications channel even whenever, on the basis of the random distribution by means of the access threshold value are not authorized access to this telecommunications channel. For instance, subscriber stations of emergency services, such as the police or fire department are assigned to a predetermined user class of this kind and can then access the telecommunications channel with priority by means of appropriate access threshold value ink, independently of the random distribution.

A further advantage is that in the evaluation unit of the at least one subscriber station, the question is asked whether the access authorization data include priority information in the form of priority threshold value, in which case and on the condition that the at least one subscriber station is assigned to a pk with a priority value, the priority value is compared with the priority threshold value, and the access to a telecommunications channel of the at least one subscriber station is granted as a function of the outcome of the comparison, preferably on the condition that the priority value is greater than or equal to the priority threshold value. In this way, among the subscriber stations randomly authorized to access this telecommunications channel, a further selection is additionally made, which prefers subscriber stations of higher priority for the access to this telecommunications channel. In this way again, subscriber stations of emergency services such as the police or fire department are given priority, although as a function of the random distribution by means of the access threshold value.

A further advantage is that in the evaluation unit of the at least one subscriber station, the question is asked whether the access authorization data include telecommunications service information, which for telecommunications services offered by the telecommunications network indicate whether the access to at least one telecommunications channel for requesting such a telecommunications service is enabled. For each of the user classes authorized access by the above-cited criteria, it is additionally defined which telecommunications services can be requested via the telecommunications channel. In this way, once again transmission capacity for transmitting the information signals is saved, since different telecommunications services need not be requested by various user classes—in accordance with the above criteria—that are authorized access; instead, for each of these preselected subscriber stations, only the specified telecommunications services can be requested via this telecommunications channel. Thus only minimal service information has to be transmitted along with the information signals.

Another advantage is that in the evaluation unit of the at least one subscriber station, the question is asked whether the access authorization data include an item of access information which indicates whether the access authorization data include either an access threshold value or access channel information, and that the access authorization data are evaluated in accordance with the answer to the question in the at least one subscriber station. In this way, the requisite transmission capacity for transmitting the information signals can be reduced still further, because the access authorization ink include either only the access threshold value or only the access channel information, but not both together.

Still another advantage is that the access to this telecommunications channel of the at least one subscriber station is enabled as a function of the incidence of message traffic on at least one telecommunications channel. In this way, an optimal distribution of the telecommunications channel resources to the subscriber stations can be attained, with the best possible utilization of the transmission capacity.

BRIEF DESCRIPTION OF THE DRAWINGS

Exemplary embodiments of the invention are shown in the drawing and explained in further detail in the ensuing description. FIG. 1 shows a detail of a telecommunications channel;

FIG. 2 shows a block circuit diagram of a subscriber station of the invention;

FIG. 2*a* shows a first bit pattern for granting access to a telecommunications channel;

FIG. 3*b* shows a second bit pattern for granting access to a telecommunications channel;

FIG. 3*c* shows a third bit pattern for granting access to a telecommunications channel; and

FIGS. 4*a*, 4*b* and 4*c* show a flow chart for the mode of operation of an evaluation unit of the subscriber station of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In FIG. **1**, reference numeral **100** indicates a base station of a telecommunications network embodied as a mobile radio network. Such a mobile radio network is normally constructed as a cellular system, and each radio cell of the mobile radio network is supplied from one base station. The base station **100** thus deploys one radio cell in the mobile radio network, in which cell, as shown in FIG. **1**, a first subscriber station **5**, a second subscriber station **10**, a third subscriber station **15** and a fourth subscriber station **20** are disposed. The four subscriber stations **5**, **10**, **15**, **20** are intended to be mobile stations, for instance, such as mobile phones, radio telephones, or the like. In the exemplary embodiment described here, the first subscriber station is accordingly intended to be embodied as a first mobile station, the second subscriber station **5** as a second mobile station, the third subscriber station **15** as a third mobile station, and the fourth subscriber station **20** as a fourth mobile station.

A network operator of the mobile radio network offers a predetermined number of telecommunications services. As examples hereinafter, three different telecommunications services are to be offered by the network operator. As a first telecommunications service, for instance, a service for sending small data packets can be provided, which can be employed by the mobile stations **5**, **10**, **15**, **20** to transmit small data packets to the base station **100** via a nonselective access class **30**, which is assumed hereinafter to be embodied as a RACH (random access channel), for example. As a second telecommunications service, a service for sending larger packet data can be provided, in which the RACH **30** can be used by the mobile stations **5**, **10**, **15**, **20** to request separate data channels for packet data transmission. As a third telecommunications service, a service for speech or landline data transmission may for instance be provided, in which the RACH **30** can be used by the mobile stations **5**, **10**, **15**, **20** to initiate or continue speech and/or data transmissions.

The three telecommunications services can be permitted individually and/or in arbitrary combination to the mobile stations **5**, **10**, **15**, **20** by the network operator.

The telecommunications services must be requested from the network operator by the applicable mobile station via the base station **100**. The telecommunications services are typically requested by the mobile stations **5**, **10**, **15**, **20** or made accessible via the RACH **30**. Via the RACH **30**, messages can as a rule be sent from a plurality of mobile stations to the base station **100**. Hence messages from various mobile stations can collide with one another. The base station **100** therefore confirms messages that have been properly received, by sending appropriate confirmation or acknowledgment ink over another channel, not shown in FIG. **1**, such as a paging channel, back to those mobile stations whose messages it has properly received.

For the case where the message from one mobile station on the RACH **30** collides with another message, proper reception of this message does not take place in the base station **100**, so that the base station **100** cannot send any confirmation ink back to the applicable mobile station, either. After a predetermined time in which no confirmation ink was received from the base station **100**, the mobile station therefore usually re-sends the message to the base station **100** via the r30. This runs the risk of overloading the r30, which thus limits the user-initiated requesting of telecommunications services by the application mobile stations because of its limited transmission capacity.

An overload on the r30 can be avoided by having the network operator restrict access to the RACH in a targeted way for the individual mobile stations **5**, **10**, **15**, **20**. The access to the RACH may for instance be permitted only for certain user classes of mobile stations either temporarily or with permanent priority. In the exemplary embodiments described in conjunction with FIG. **1**, a first user class **35** is provided, which includes the first mobile station **5** and the second mobile station **10**. A second user class **40** is also provided, which includes the third mobile station **15** and the fourth mobile station **20**. However, it can also be provided that each mobile station be provided with its own user class. User classes with different numbers of mobile stations can also be provided. It is furthermore possible to provide more than one mobile station in one user class. The network operator can now enable access to the RACH by the individual mobile stations as a function of their membership in one of the two user classes **35**, **40**. This means that the two mobile stations **5**, **10** of the first user class **35** are granted equal rights for transmitting on the RACH. Analogously, the mobile stations **15**, **20** of the second user class **40** can be granted equal rights for transmitting on the RACH.

By means of information signals, which are transmitted from the base station **100** to the applicable mobile station **5**, **10**, **15**, **20**, the network operator informs the various mobile stations **5**, **10**, **15**, **20** which rights for transmitting on the RACH are granted to the applicable mobile station **5**, **10**, **15**, **20**. This will be described below in terms of the granting of rights to transmission on the RACH to the first mobile station **5** of FIG. **1**, as an example for all the mobile stations **5**, **10**, **15**, **20**.

At predetermined times, the base station **100** transmits information signals to the first mobile station **5**. The information signals can be transmitted, as shown in FIG. **1**, via a signaling channel **25**, hereinafter embodied as an example as a broadcast control channel or BCCH. With each of the information signals at the predetermined times, one bit pattern is transmitted to the first mobile station **5**. In a first embodiment, the bit pattern can contain ink telling for what purpose access to the RACH is allowed, and which mobile stations are allowed access.

Among the possible purposes for access are for instance the cases already described above, such as sending small data packets, requesting a channel for larger packet data, and requesting a channel for speech/data services.

Another possible purpose for access, however, is sending signaling information from the subscriber station to the base station, ink which serves to maintain and/or modify already existing connections.

Since the bit pattern sent from the base station is sent not only to the first mobile station **5** but also to all the other mobile stations **10**, **15**, **20**, and likewise over the signaling channel **25**, which as described is embodied as a BCCH, that is, a point-to-multiple-point channel, so that all the mobile stations receive the same ink at the same time, the bit pattern includes the access rights granted to each user class **35**, **40**, for the sake of informing the mobile stations of the RACH access rights they have been allowed.

A random distribution of the access authorization on the r30 over some of the mobile stations **5, 10, 15, 20** is attained in that an access threshold value S is sent over the BCCH. In FIG. **2**, a block circuit diagram of the first mobile station **5** is shown as an example. The first mobile station **5** includes one transceiver unit **65** with one transmitting/receiving antenna **70**. The transceiver unit **65** is also connected to an evaluation unit **60**, which accesses an access authorization card **75**, such as a SIM card (subscriber identity module card). In FIG. **2**, only the elements of the first mobile station **5** that are necessary to describe the invention are shown. The method of the invention will be described below in terms of the first mobile station **5** as an example, but the second mobile station **10**, third mobile station **15** and fourth mobile station **20** have the same construction described in conjunction with FIG. **2**. The first mobile station **5**, by means of its transceiver unit **65**, receives the information signals, which include the access threshold value S, that were transmitted over the BCCH **25**. The access threshold value S is delivered to the evaluation unit **60**. Before each access to the RACH **30** by the first mobile station **5**, the evaluation unit **60** draws a random or pseudo-random number R and asks whether the random or pseudo-random number R is at least as great as the access threshold value S. Only then is an access to the r30 allowed. For instance, the access threshold value S is from the interval {0, 1, . . . , n+1}, and the random or pseudo-random number R is from the interval {0, 1, . . . n1}. As a result, the use of the r30 with the access threshold value S=n+1 can be restricted for all the mobile stations **5, 10, 15, 20**; that is, the access to the r30 can be prevented. If the random or pseudo-random number R is drawn from the corresponding interval {0, 1, . . . , n} by means of a uniformly distributed random function, then the probability of access to the r30 is the same for all the mobile stations **5, 10, 15, 20**.

A first exemplary embodiment will now be described in conjunction with FIGS. **3***a* and **3***b*. Access authorization data **45, 50, 55** are embodied, in the first exemplary embodiment and in further exemplary embodiment, as bit patterns; the access authorization data **45, 50, 55** are transmitted along with the information signals to the mobile stations **5, 10, 15, 20**, and the access authorization data **45, 50, 55** include the ink about the rights to using the r30. In the first exemplary embodiment, information signals are transmitted to each mobile station **5, 10, 15, 20** and each information signal includes one bit pattern, comprising 10 bits. A first bit is an evaluation bit S4. FIG. **3***a* shows the case where the evaluation bit S4=0. The second bit is then a first access threshold value bit S3; the third bit is a second access threshold value bit S2; the fourth bit is a third access threshold value bit S1; and the fifth bit is a fourth access threshold value bit S0. With the four access threshold value bits S3, S2, S1, S0, in this example **24=16** access threshold values S are transmitted by the network operator to the mobile stations **5, 10, 15, 20**; via the BCCH **25**, the same access threshold value S is transmitted to all the mobile stations **5, 10, 15, 20**. Depending on the current incidence of message traffic in the telecommunications network, the access threshold value S can be set higher or lower, that is, can be changed or adapted. For 16 possible access threshold values S, a maximum of 16 access channels for the mobile stations **5, 10, 15, 20** can be bundled together; the membership of a mobile station **5, 10, 15, 20** in one of the 16 access classes depends on the drawing of one of 16 random or pseudo-random numbers R in the applicable evaluation unit of the mobile station **5, 10, 15, 20** and thus can change each time a new draw is done. The sixth bit in the first bit pattern **45** is a first telecommunications service bit D2; the seventh bit is a second telecommunications service bit D1, and the eighth bit is a third telecommunications service bit D0. The first telecommunications service bit D2 indicates whether the first telecommunications service can be utilized; the second telecommunications service bit D1 indicates whether the second telecommunications service can be used; and the third telecommunications service bit D0 indicates whether the third telecommunications service can be used. It can be agreed upon that a telecommunications service is usable whenever the associated telecommunications service bit is set.

The bits **5, 10, 15, 20** can additionally be assigned to so-called priority channels **80, 85**. In FIG. **1**, the fourth mobile station **20** is assigned to class pd **80**. In FIG. **1**, the first mobile station **5** and the third mobile station **15** are assigned to a second pk **85**. The second mobile station **10** in FIG. **1** is not assigned to any pk. The ninth bit of the first bit pattern **45** is a first priority bit P1, and the tenth bit of the first bit pattern **45** is a second priority bit p). Thus via the first bit pattern **45**, a priority threshold value P with four different values can be transmitted to the mobile stations **5, 10, 15, 20**. Therefore a maximum of four priority channels, each of different priority, can be distinguished from one another by the priority threshold value P. In FIG. **1**, only two of the four possible priority channels of FIG. **3***a* are shown. The first pk **80** could for instance be a pk for emergency services such as the police or fire department, and could have the highest priority value 4. The second pk **85** could for instance be a pk for a city energy provider, with a somewhat lower priority value 3. If a mobile station **5, 10, 15, 20** belongs to a pk, then the associated priority value is stored in memory on the access authorization card **75** and can be detected there by the evaluation unit **60**. Of the mobile stations **5, 10, 15, 20** that draw a random or pseudo-random number **4** that is greater than or equal to the access threshold value S, then only those whose priority value is also greater than or equal to the priority threshold value P then gain authorization for access to the r30. In the case of the second mobile station **10**, which is not assigned to any pk, it can be provided that its evaluation unit draws one random or pseudo-random priority value from the four possible priority values and compares the priority value it has drawn with the priority threshold value P transmitted, and gains authorization for access to the r30 if the random or pseudo-random priority value is greater than or equal to the priority threshold value P. This is on the condition that the random or pseudo-random number R drawn by the evaluation unit of the second mobile station **10** is also greater than or equal to the access threshold value S. However, it can also be provided that the mobile stations that do not belong to any pk need not perform any comparison with the priority threshold value P, but instead merely have to draw a random or pseudo-random number R that is greater than or equal to the access threshold value S, in order to be allowed access to the r30. A mobile station is not assigned to any pk whenever there is no priority value stored in memory on the inserted access authorization card **75**.

It can also be provided that a predetermined priority value that corresponds to one of the four possible priority values is stored in a memory of the evaluation unit. If the evaluation unit **60** does not detect any priority value on the access authorization card **75**, it can use the predetermined priority value for comparison with the priority threshold value P as described.

In FIG. **3***b*, a second bit pattern **50** is shown, again with a bit length of 10 bits; the layout of the second bit pattern **50** matches that of the first bit pattern **45**, with the exception

that the evaluation bit S4 is set to 1, and therefore the second bit, third bit, fourth bit and fifth bit of the second bit pattern **50** are no longer defined as threshold value bits but rather as access class bits. Thus the second bit of the second bit pattern **50** is a first access class bit Z3; the third bit of the second bit pattern **50** is a second access class bit Z2; the fourth bit of the second bit pattern **50** is a third access class bit Z1; and the fifth bit of the second bit pattern **50** is a fourth access class bit Z0. The first access class bit Z3 stand for the first user class **35**; the second access class bit Z2 stands for the second user class **40**; the third access class bit Z1 stands for a third user class, not shown in FIG. **1**; and the fourth access class bit Z0 stands for a fourth user class, again not shown in FIG. **1**. The access class bits as a whole are also called access class ink.

In FIG. **1**, all the mobile stations **5, 10, 15, 20** are assigned to the first user class **3** or the second user class **40**. However, they can also be assigned to the third user class or the fourth user class, or not to any user class. If an access class bit in the second bit pattern **50** has the value 0, or in other words is not set, then all the mobile stations of the associated user class can access the r30.

If an access class bit of the second bit pattern **50** is set to **1**, then no mobile station of the associated user class can access the r30.

All the mobile stations that are allowed to access the r30 can use those telecommunications services whose associated telecommunications service bits in the first bit pattern **45** or the second bit pattern **50** are set.

It can also be provided that a predetermined priority value, which corresponds to one of the four possible priority values, is stored in a memory of the evaluation unit. If the evaluation unit **60** finds no priority value on the access authorization card **75**, then it can use the predetermined priority value for comparison with the priority threshold value P, as described.

The membership in a user class is also detected by the evaluation unit of the corresponding mobile station from the access authorization card **75**. If no user class is stored in memory on the car, then the evaluation unit of the corresponding mobile station recognizes that this mobile station does not belong to any user class.

If the evaluation bit S4 is set to 1, no access to the r30 is possible for mobile stations that do not belong to any user class.

Below an example will be described for a bit pattern whose bit length is 10 bits and which is transmitted along with the information signal. In this example, the bit sequence "to 0 1000 011 01" is sent to the mobile stations **5, 10, 15, 20** by the base station **100** via the BCCH **25**. This means that the mobile stations that are assigned to a user class will be treated like mobile stations that are not assigned to any user class, since the evaluation bit S4 is not set. The access threshold value S is encoded in binary form by means of the access threshold value bits S3, S2, S1, S0, and the priority threshold value P is encoded in binary form by the priority bits P1, P0. For the access threshold value S, a value of 8 thus results, and for the priority threshold value P, a value of 1. If after P and S have been evaluated a mobile station is authorized access, then it is still allowed use of the RACH solely for channel requests for larger packet data services and for speech/data services. Because of the above setting for the service ink, such mobile stations are NOT permitted to use the RACH for sending small data packets.

The second, third, fourth and fifth bits of the first bit pattern **45** and second bit pattern **50** represent access authorization ink, which in the first bit pattern **45** indicates the access threshold value S and in the second bit pattern **50** indicates the authorization of access for the four user classes. The first bit determines whether the second through fifth bits will be interpreted in accordance with the first bit pattern **45** or the second bit pattern **50**.

In a second exemplary embodiment, in FIG. **3***c* a third bit pattern **55** that has a bit length of 13 bits is transmitted along with the information signals from the base station **100** to the mobile stations **5, 10, 15, 20**. The third bit pattern **55** has no evaluation bit S4 and therefore includes both the access threshold value bits S3, S2, S1, S0 and the access class bits Z3, Z2, Z1, Z0. In addition, like the first bit pattern **45** and the second bit pattern **50**, the third bit pattern **55** includes the telecommunications service bits D2, D1, D0 and the priority bits P1, P0. Mobile stations that belong to a user class for which the associated access channel bit is 0 can access the RACH **30** regardless of the access threshold value S and the priority threshold value P, and thus optionally without their being evaluated in the evaluation unit **60**. Both mobile stations that belong to a user class whose associated access channel bit is set to **1** and mobile stations that do not belong to any user class must, in order to ascertain their authorization to access the r30, must perform the access threshold value evaluation already described for the first exemplary embodiment—and optionally the priority threshold value evaluation also described in the first exemplary embodiment. The following bit sequence will be taken as an example: "1000 0110 011 01". This means that an access threshold value S=8 has been selected; that the mobile stations of the first user class **35** and the fourth user class, not shown in FIG. **1**, are allowed access to the r30 independently of any evaluation of the access threshold value S and optionally of the priority threshold value P, but the mobile stations of the second user class **40** and the third user class, not shown in FIG. **1**, are not allowed to access the r30 without evaluation of the access threshold value S and optionally of the priority threshold value. For the priority threshold value P, a value of 1 results. The access-authorized mobile stations are not allowed to use the RACH to send small data packets, but they are allowed to send channel requests for larger packet services and speech/data services over the RACH. In contrast to the first exemplary embodiment, it is possible in the second exemplary embodiment not only for mobile stations that are allowed access to the r30 by reason of their membership in a user class but also for mobile stations that draw a random or pseudo-random number R that is greater than or equal to the access threshold value S and that optionally have a priority value above the priority threshold value P to access the r30.

In comparison to the first bit pattern and the second bit pattern, in the third bit pattern the access authorization ink includes both the access threshold value bits S3, S2, S1, S0 and the access channel bits Z3, Z2, Z1, Z0.

The numbers of bits used for the access threshold value S, the access channel ink Z0, Z1, Z2, Z3, the priority threshold value P and the telecommunications service ink D0, D1, D2 are understood to be merely examples, and they can also be increased, for example for more-extensive signaling, and reduced, for the sake of bandwidth reduction. In this case, the total length of the bit patterns **45, 50, 55** may change as well. Individual components of the ink can optionally also be omitted entirely.

FIGS. **4***a*, **4***b*, and **4***c* show a flow chart for the mode of operation of the evaluation unit **60**. At a program point **200**, the evaluation unit **60** asks the question whether the information signals received over the BCCH **25** include a bit pattern having the bit length of 10 bits. If so, the next step

is a program point **205**; if not, the next step is a program point **280**. At program point **205**, the evaluation unit **60** asks whether the evaluation bit **S4=0**. If so, the next step is a program point **210**; if not, it is a program point **230**. At program point **210**, from the access threshold values **S3, S2, S1, S0**, the evaluation unit **60** ascertains the access threshold value S and draws a random or pseudo-random number R from the set of possible access threshold values S; the largest possible access threshold value S can be excepted from the drawing of the random or pseudo-random number R. The next step is a program point **215**. At program point **215**, the evaluation unit **60** asks whether the random or pseudo-random number R is greater than or equal to the access threshold value S. If so, the next step is a program point **220**; if not, an exit is made from the program. At program point **220**, the evaluation unit **60** asks whether a priority value of an assigned pk is stored in memory on the access authorization card **75**. If so, the next step is a program point **225**; if not, it is a program point **290**. At program point **290**, the evaluation unit **60** asks whether a predetermined priority value is stored in a memory assigned to the evaluation unit. If so, the next step is program point **225**; if not, it is a program point **245**. At program point **225**, the evaluation unit **50** ascertains the priority threshold value P from the bit pattern received. The next step is a program point **240**. At program point **240**, the evaluation unit **60** asks whether the priority value is greater than or equal to the priority threshold value P. If so, the next step is program point **245**; if not, the program is exited. At program point **245**, from the telecommunications service bits from the bit pattern, the evaluation unit **60** ascertains what the usable telecommunications services are. The next step is a program point **250**. At program point **250**, the evaluation unit **60** enables access to the r30 by the associated mobile station for using the usable telecommunications service. Next, the program is exited. At program point **230**, the evaluation unit **60** asks whether the membership in a user class is stored in memory on the access authorization card **75**. If so, the next step is a program point **235**; if not, the program is exited. At program point **235**, from the access channel bits, the evaluation unit **60** asks whether the mobile station user class ascertained from the access authorization card **78** is allowed access to the r30. If so, the next step is program point **245**; if not, the program is exited. At program point **280**, the evaluation unit **60** has detected that a bit pattern with the bit length of 13 bits has been received, and it asks whether a membership of the associated mobile station in a user class is stored in memory on the access authorization card **75**. It is also asked, at program point **280**, whether the user class belongs to a first group of user classes or to a second group of user classes. The first group of user classes will be referred to hereinafter as normally privileged. The second group of user classes will be referred to hereinafter as preferentially authorized. If it is detected at program point **280** that a membership of the associated mobile station in the preferentially authorized user class exists on the access authorization card **75**, then the program moves to program point **285**. If not, that is, if no membership of the mobile station in a user class is detected on the access authorization card **75**, or if the normally privileged user class is detected, then the program moves to program point **210**. If that is the case, the next step is a program point **285**, and if not, it is a program point **210**. At program point **285**, on the basis of the access channel bits at **Z3, Z2, Z1, Z0** of the bit pattern received, the evaluation unit **60** asks whether the user class ascertained for the mobile station is authorized access to the r30. If so, the next step is program point **245**; if not, it is program point **210**.

In all cases where the program is not exited from program point **250**, the evaluation unit **50** will have found no allowed access to the r30 for the associated mobile station **5**. After the end of the program, the mobile station informs the user that the access to the r30 was not possible, and waits for further inputs from the user. Alternatively, by means of a waiting loop embodied in the mobile station, the program is executed over again, so there is a wait for the next information signal with the next bit pattern, and the information signal is then evaluated to ascertain the ab to the r30.

The information signals are transmitted from the base station **100** to the mobile station **5, 10, 15, 20** are predetermined times, preferably at regular intervals. The network operator can, by the method described, either permit or block access to the RACH as a function of the incidence of message traffic in the telecommunications network and thus as a function of an expected utilization of the r30 for the individual mobile stations **5, 10, 15, 20**. Since the incidence of message traffic in the telecommunications network varies over time, the expected utilization of the r30 also varies over time, so that by means of the correspondingly changed bit pattern allocation, access to the RACH is as a rule allocated to the various mobile stations **5, 10, 15, 20** at different times.

A relief of the r30 can additionally be attained by providing a repetition counter and/or a repeat interval. The repetition attempts allowed for re-sending a message from the corresponding mobile station to the base station **100** over the r30, in the event of collision with a message from another mobile station. The repeat interval is a stochastic measure of the time interval until the next repetition of the message sent over the r30 from the applicable mobile station to the base station **100**. The lower the number of repeat attempts allowed, and the greater the repeat interval, the greater the relief of the r30. Together with the bit pattern of the access rights granted, the repetition counter and/or the repeat interval can be imparted to the applicable mobile stations at regular time intervals over the associated signaling channel **25**, optionally along with other radio-cell-specific ink. The method of the invention can be achieved in a mobile radio network by the UMTS (Universal Mobile Telecommunication System) standard, the GSM standard, or the like.

The method of the invention is not limited to use in a mobile radio network, but instead can be employed generally in telecommunications networks in which there is a telecommunications channel that is used by a plurality of subscriber stations to request telecommunications services and/or to send data packets; the telecommunications network can for instance also be a fixed landline network.

In another version, it can also be provided that for an authorization of access, the prerequisite is a random or pseudo-random number R less than the access threshold value S. Correspondingly, for the priority checking by means of the priority threshold value P, it can be a prerequisite that the random or pseudo-random number R is less than the priority threshold value P.

The invention claimed is:

1. A method for allocating rights of access to at least one telecommunications channel usable by a plurality of subscriber stations in common, of a telecommunications network to at least one subscriber station **(5, 10, 15, 20)** of a telecommunications network, comprising the steps of transmitting information signals to at least one subscriber station **(5, 10, 15, 20)**; transmitting with the information signals, access authorization data **(45, 50, 55)** to the at least one subscriber station **(5, 10, 15, 20)**; upon reception of the access authorization data **(45, 50, 55)** in an evaluation unit **(6)** of the at least one subscriber station **(5, 10, 15, 20)**,

asking a question whether the access authorization data (45, 50, 55) include an access threshold value (S), and comparing the access threshold value (S) with a random number or a pseudo-random number (R); and granting a right of access to a telecommunications channel of the at least one subscriber station (5, 10, 15, 20) as a function of an outcome of the comparison.

2. A method as defined in claim 1; and further comprising granting the right of access as a function of the outcome of comparison on a condition that the random number or the pseudo-random number (R) is greate than or equal to the access threshold value (S).

3. A method as defined in claim 1; and further comprising transmitting the access information data (45, 50, 55) as bit patterns.

4. A method as defined in claim 1; and further comprising transmitting the information signals to the at least one subscriber station (5, 10, 150, 20) via at least one signaling channel (25).

5. A method as defined in claim 1; and further comprising enabling the access to at least one communication channel of the at least one subscriber station (5, 10, 15, 20) as a function of an incidence of message traffic on at east on telecommunication channel.

6. A method for allocating rights of access to at least one telecommunications channel usable by a plurality of subscriber stations in common, of a telecommunications network to at least one subscriber station (5, 10, 15, 20) of a telecommunications network, comprising the steps of transmitting information signals to at least one subscriber station (5, 10, 15, 20); transmitting with the information signals, access authorization data (45, 50, 55) to the at least one subscriber station (5, 10, 15, 20): upon reception of the access authorization data (45, 50, 55) in an evaluation unit (6) of the at least one subscriber station (5, 10,15, 20), asking a question whether the access authorization data (45, 50, 55) include an access threshold value (S), and comparing the access threshold value (S) with a random number or a pseudo-random number (R); and granting a right of access to a telecommunications channel of the at least one subscriber station (5, 10, 15, 20) as a function of an outcome of the comparison; and further comprising asking in the evaluation unit of the at least one subscriber station (5, 10, 15, 20) a question whether the access authorization data (45, 50, 55) include access authorization Information (S0, S1, S2, S3, S4, Z0, Z1, Z2, Z3) with access class information (Z0, Z1, Z2, Z3) for at least one predetermined user class (35, 40) in which case and on a condition that the at least one subscriber station (5, 10, 15, 20) is assigned to an at least one predetermined user class (35, 40) to which access to at least one telecommunication channel of the at least one subscriber station (5, 10, 15, 20) is granted as a function of the access class information (Z0, Z1, Z2, Z3) for this user class (35, 40).

7. A method for allocating rights of access to at least one telecommunications channel usable by a plurality of subscriber stations in common, of a telecommunications network to at least one subscriber station (5, 10, 15, 20) of a telecommunications network, comprising the steps of transmitting information signals to at least one subscriber station (5, 10, 15, 20); transmitting with the information signals, access authorization data (45, 50, 55) to the at least one subscriber station (5, 10, 150, 20); upon reception of the access authorization data (45, 50, 55) in an evaluation unit (6) of the at least one subscriber station (5, 10, 15, 20), asking a question whether the access authorization data (45, 50, 55) include an access threshold value (S), and comparing the access threshold value (S) with a random number or a pseudo-random number (R); and granting a right of access to a telecommunications channel of the at least one subscriber station (5, 10, 15, 20) as a function of an outcome of the comparison; and further comprising asking in an evaluation unit (60) of the at least one subscriber station (5, 10, 15, 20) a question whether the access authorization data (4, 50, 55) include priority information in form of a priority threshold value (P), in which case and on a condition that the at least one subscriber station (5, 10, 15, 20) is assigned to a pk (80, 85) with a priority value, comparing the priority value with the priority threshold value (P), and granting an access to a telecommunication channel of the at least one subscriber station (5, 10, 15, 20) as a function of an outcome of the comparison.

8. A method as defined in claim 7, wherein said granting the access to a telecommunication channel as a function of the outcome of the comparison is performed on a condition that the priority value is greater than or equal to the priority threshold value (P).

9. A method for allocating rights of access to at least one telecommunications channel usable by a plurality of subscriber stations in common, of a telecommunications network to at least one subscriber station (5, 10, 15, 20) of a telecommunications network, comprising the steps of transmitting information signals to at least one subscriber station (5, 10, 15, 20); transmitting with the information signals, access authorization data (45, 50, 55) to the at least one subscriber station (5, 10, 15, 20); upon reception of the access authorization data (45, 50, 55) in an evaluation unit (6) of the at least one subscriber station (5, 10, 15, 20), asking a question whether the access authorization data (45, 50, 55) include an access threshold value (S), and comparing the access threshold value (S) with a random number or a pseudo-random number (R); and granting a right of access to a telecommunications channel of the at least one subscriber station (5, 10, 15, 20) as a function of an outcome of the comparison; and further comprising asking an evaluation unit (60) of the at least one subscriber station (5, 10, 15, 20) a question whether the access authorization data (45, 50, 55) include telecommunications service information (D0, D1, D2), which for telecommunications services offered by the telecommunications network indicate whether the access to at least one telecommunications channel for use, or a request for such a telecommunications surface is enabled.

10. A method for allocating rights of access to at least one telecommunications channel usable by a plurality of subscriber stations in common, of a telecommunications network to at least one subscriber station (5, 10, 15, 20) of a telecommunications network, comprising the steps of transmitting information signals to at least one subscriber station (5, 10, 15, 20); transmitting with the information signals, access authorization data (45, 50, 55) to the at least one subscriber station (5, 10, 15, 20); upon reception of the access authorization data (45, 50, 55) in an evaluation unit (6) of the at least one subscriber station (5, 10, 15, 20), asking a question whether the access authorization data (45, 50, 55) include an access threshold value (S), aid comparing the access threshold value (S) with a random number or a pseudo-random number (R); and granting a right of access to a telecommunications channel of the at least one subscriber station (5, 10, 15, 20) as a function of an outcome of the comparison; and further comprising asking an evaluation unit (60) of the at least one subscriber station (5, 10, 15, 20) a question whether the access authorization data (45, 50, 55) include an item of access information (S4) which indicates whether the access authorization data (45, 50, 55) are

evaluated as an access threshold value (S), as an access channel information (Z0, Z1, Z2, Z3) as a priority threshold value (P), and/or as telecommunications service information (D0, D1, D2).

11. A method for allocating rights of access to at least one telecommunications channel usable by a plurality of subscriber stations in common, of a telecommunications network to at least one subscriber station (5, 10, 15, 20) of a telecommunications network, comprising tile steps of transmitting information signals to at least one subscriber station (5, 10, 15, 20); transmitting with the information signals, access authorization data (45, 50, 55) to the at least one subscriber station (5, 10, 15, 20); upon reception of the access authorization data (45, 50, 55) in an evaluation unit (6) of the at least one subscriber station (5, 10, 15, 20), asking a question whether the access authorization data (45, 50, 55) include an access threshold value (S), and comparing the access threshold value (S) with a random number or a pseudo-random number (R); and granting a right of access to a telecommunications channel of the at least one subscriber station (5, 10, 15, 20) as a function of an outcome of the comparison; and further comprising asking an evaluation unit (60) of the at least one subscriber station (5, 10, 15, 20) a question whether the access authorization data (45, 50, 55) include an item of access information (S4), which indicates whether the access authorization data (45, 50, 55) include either an access threshold value (S) or access channel information (Z0, Z1, Z2, Z3), and evaluating the access authorization data (45, 50, 55) in accordance with an answer to the question in the at least one subscriber station (5, 10, 15, 20).

12. A method for allocating rights of access to at least one telecommunications channel usable by a plurality of subscriber stations in common, of a telecommunications network to at least one subscriber station (5, 10, 15, 20) of a telecommunications network, comprising the steps of transmitting information signals to at least one subscriber station (5, 10, 15, 20); transmitting with the information signals, access authorization data (45, 50, 55) to the at least one subscriber station (5, 10, 15, 20); upon reception of the access authorization data (45, 50, 55) in an evaluation unit (6) of the at least one subscriber station (5, 10, 15, 20), asking a question whether the access authorization data (45, 50, 55) include an access threshold value (S), and comparing the access threshold value (S) with a random number or a pseudo-random number (R); and granting a right of access to a telecommunications channel of the at least one subscriber station (5, 10, 15, 20) as a function of an outcome of the comparison: transmitting the access information data (45, 50, 55) as bit patterns; and further comprising providing in the at least one telecommunication channel at least partly a nonselective access class (30).

13. A subscriber station to which an access to at least one telecommunication channel usable by a plurality of subscriber stations in common can be granted, comprising means for receiving information signals; an evaluation unit (60) for asking when information signals with access authorization data means (65) as authorization data (45, 50, 55) are received, whether the access authorization data (45, 50, 55) include an access threshold value (S) for comparison of the access threshold value (S) with a random number or a pseudo-random number (R), and for ascertaining, as a function of an outcome of a comparison whether an access of the at least one subscriber station (5, 10, 15, 20) to the at least one telecommunications channel is enabled.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 7,043,751 B1
APPLICATION NO. : 09/914967
DATED : May 9, 2006
INVENTOR(S) : Fischer et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

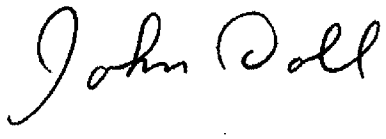
Title Page

Under (75) Inventors:

After line 6, please add --Holger Schulz (DE)--

Signed and Sealed this

Twenty-eighth Day of July, 2009



JOHN DOLL
Acting Director of the United States Patent and Trademark Office

CERTIFICATE OF SERVICE

The undersigned hereby certifies that true and correct copies of the foregoing CORRECTED PRINCIPAL BRIEF OF APPELLANT IPCOM GMBH & CO. were served this 25th day of September 2015 by CM-ECF upon all counsel of record.

/s/ Meredith Martin Addy

CERTIFICATE OF COMPLIANCE

I hereby certify that this brief complies with the type-volume limitation under Rule 32(a)(7)(B) of the F.R.A.P. There are 13,179 words in the portions of the brief specified by the Federal Circuit Rules as measured by the word processing software used to prepare the brief.

/s/ Meredith Martin Addy